

THE  
CALCUTTA REVIEW.

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SEPTEMBER, 1861.

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- ART. I.—1. *The Punjab Annual Report.*  
2. *The Punjab Judicial and Revenue Reports.*  
3. *The Friend of India*, 1859–60–61.  
4. *The Indian Field*, 1859.  
5. *The Dacca News*, 1857–58–59.  
6. *Cooper's Crisis in the Punjab.*  
7. *The Punjab Mutiny Report.*

AN intelligent study of the history of the British rule in India for the last fifty years would lead to the discovery of practical truths of the highest political importance. To such as are willing to believe in the progress of political science, it would be evident that government cannot long exercise its high functions to the benefit of society, unless it is able to provide for such necessities as are incident on social progress; and that wherever it has dispensed with its provident character, it has rendered the interest of the public subservient to its own. Let the advocates of uncompromising conservatism bear in mind, that no government has any higher claims to public support, than such as may be founded on its actual utility. On the score of past merits it may be borne in the grateful recollection of distant posterity; but its claim to perpetuation must rest on more reasonable grounds than the mere fact of its antiquity. Government and society enter into a compact of mutual obligation; society is willing to bear certain restraints as long as government is able to guard and conserve its interests; and when government has ceased to exercise its powers to the benefit of society, society is justified in dispensing with its protection.

The advocates of reform are willing to adapt government to the growing necessities of progressing events, and to prolong its existence by increasing its usefulness. A government that does not work for the benefit of the governed, will only hold out as long as the governing power is physically the strongest.

The experience of our late troubles has successfully exposed the dangerous illusion, so flattering to our self-complacency, that our government of India was a rule of moral force based on actual sympathy, and that wherever conquest carried our arms, our sovereignty was hailed as a deliverance. After a short period of necessary humiliation, we are now willing to distinguish conquest from conservatism, the silent submission imposed by physical force from the voluntary and cheerful allegiance which strengthens the hands of government. Let us for ever dispel all false lights from the subject, let us bid adieu to faint-hearted vacillation, and recognize the importance and difficulty of our position, rather than evade or avoid it as a topic well understood, if not finally disposed of.

Let us recognize also the great political truth, that in the government of a conquered race, conservatism must be blended with assimilation, and let us for ever take leave of that mischievous policy which would advocate the engrafting of foreign institutions on an uncongenial soil, without heeding the absence of those concomitants which enter so largely into the success of all such attempts. Should we, after all have acquired the secret of rendering the government of an alien and dominant race not unpalatable, if not popular, the lesson is well worth the century of failures and embarrassments, which once endangered the credit of our Indian Empire. It is, however, a circumstance of auspicious augury, that the only practical mode of conciliating our alien subjects, was enunciated by the nobleman who now rules our Indian Empire, and it is also satisfactory to remark that the policy so happily inaugurated, has received the consistent support of a large portion of the Indian Press.

Not to cherish institutions condemned alike by laws and feelings, but to improve, foster and conserve the popular elements of native society, and to adapt the administrative machinery to the genius of the people is the policy which would popularize and strengthen our Government, and perhaps render us personally less and less the objects of antipathy and odium.

It would be foreign to the object of the present article to discuss the expediency of an extensive introduction of independent European agency into this country. The subject is one of grave importance. The advocates of the measure are

too apt to reason, though not consistently, from abstract rights; while, on the other hand, their opponents are just as eager to be led away by wrong inferences from the seemingly analogous circumstances in other colonies, where the aborigines have almost disappeared under Anglo-Saxon supremacy.

We do not for a moment dispute the fact that under a fair, watchful and considerate government, the presence of independent Europeans would instil into public opinion, now so painfully identical with official opinion, a healthier tone; nor deny that in developing the resources of the country, and, in bringing into play native talent and native capabilities, European energy and application would exercise a decidedly beneficial influence. But even after these admissions, we cannot hide from ourselves the difficulty which still stares us in the face: the interests of the foreigner and the interests of his humble fellow-subjects, the natives, cannot be said to bear many points of similitude; we must, therefore, resort to precautionary legislative measures to obviate a collision between them, and trust to the harmonizing influence of mutual knowledge and necessity for that co-operation which can only result in mutual good.

Just as foreign to our object is it to solve the vexed problem of the equality of races. There are certain aspects of the question which defy discussion. Its obvious equity, its claims upon general principles of morality and the sanction of scripture, are raised as much above doubt as above controversy. Yet the practical recognition of equal legislation in this country would be attended by disasters, much more formidable than the revolt of a hundred thousand armed hirelings. The force of abstract truths we do not venture to deny, but to assert them in legislation without a compromise with circumstances, would be to ignore the existence of passions and affections which so largely influence men's actions. If to yield to popular prejudices be weakness, to oppose them out of season would be imbecility.

The principle of assimilation and step by step reform, as opposed to that of the forcible eradication of existing institutions, and the substitution of unpalatable exotics, never avowedly formed part of our policy in this country. We have certainly not been outrageously radical in our policy; there has been no dearth of toleration for harmless prejudices, no want of just abhorrence for the dangerous ones, no lack of will to conciliate. But to develop the popular elements of the indigenous social and political economy was neither desired nor appreciated. On the contrary, the complicated appliances of a high state of civilization were strenuously employed for the amelioration of

the people, though with what melancholy results we shall not expatiate upon here.

It was in the month of March, 1849, that the Sikh sovereignty in the Punjab had ceased, and in succeeding to its responsibility we inaugurated a system of government, which, by strengthening the hands of the executive with confidence and responsibility, by mitigating the severity of law by an infusion of equity, and, above all, by adapting the administrative machinery to the genius, habits, and capacity of the people, has a fair chance, if a foreign government can ever be said to have it, of engendering lasting and substantial sympathy between the conquerors and the conquered race.

We claim for the Punjab administrator no higher credit than that which is due to success. The character of its subjects must form an element in the estimate we make of a government, and it would be folly to institute a comparison between two forms of government without entering into a consideration of the social and political condition of the two people. The ideal government of speculative 'thinkers,' which we are bound to believe is guided by perfect rules of ethics and policy, we do not mean to imitate or to offer for imitation; suffice it to say that, from the limited existence of perfection, even a perfect government itself can have only a very confined range of utility. It is enough for us to watch the progress of a people under a good government, without idly speculating on its probable destiny under a perfect one.

That the administration of the Punjab has been one of hitherto unparalleled success is too clear for discussion, and that some of its simple machinery may with advantage be introduced into the older provinces of our Indian Empire, has been doubted by those alone who profess to be able to judge of the necessities of a people by the exceptional cases of individual wants. With the progress of civilization public interests increase both in number and importance; indeed commerce alone has arrived at a state of dignity to require a code of its own. An involved and intricate judicial machinery is indispensable to a high state of civilization, but to such as have so long advocated its introduction into our Indian provinces, we commend the study of the present state of Bengal, where we find a 'demoralised people and a disorganized country' which a century of improved government can alone save from hopeless degeneracy. The introduction of legal subtlety into our Indian courts has not been without its effect on native ingenuity; in some points of native character we remark, if we are permitted the phrase, *a stunted development*,

devoid alike of the strength and symmetry of healthy growth. With laws perfectly unsuited to the habits of the people, with an executive contemptibly weak, we have realized in some parts of Bengal the worst evils of the darkest days of European feudalism.

Happily the disparagers of the Punjaub government cannot even pretend to speak from experience; the voice of discontent is raised from without, and is justified by that species of logic which only deals in strong language and bold assertions. Always severe, what they lack in truth they invariably make up by virulence. There is no denying the abstract weight of some of their arguments, but, as the Emperor Napoleon observed to the ruler of the Vatican, 'facts have an irresistible logic of their own.' The theory which they advocate is an admirable product of pure reason: it is undeniable that large discretionary powers have often been abused; it is also true that to concentrate triple powers in one individual has its own peculiar dangers; that to centralize powers does not tend to improve official efficiency, and that technicalities are indispensable to any but the most simple code of laws. The reasoning is admirable, the conclusions true, the theory is deficient only in applicability.

It is our object here to investigate the causes which have conduced to the prosperity of the Punjab and to the popularity of the Punjab Government. The dangers apprehended from the turbulent character of the natives of the Punjab have happily proved groundless. Nay more, of the millions who acknowledge our supremacy in India they stand foremost in co-operating with the Government, and in active sympathy with its difficulties and success. Brave and honest, they have offered Government useful allegiance, without that profession of abject submission which is seldom sincere and even when not tainted with hypocrisy always contemptible. Good citizens and hardy soldiers, fond of peace but not afraid of war, they have proved less obnoxious to the public peace, are less inured in criminality than the effeminate population of our older provinces.

When their struggles for dominion closed with the demoralization of a powerful army, large bodies of men, who had so lately coerced their own Government, betook themselves to useful pursuits with manly forbearance, turning their swords into plough-shares and prosecuting commerce, trade and agriculture with surprising energy.

Trained from their infancy to the use of arms, and capable of the most heroic fortitude, and most chivalrous devotion, the Punjabees have yet that feeling of respect for law, and entertain that

wholesome dread of crime, which have been productive of the the best social results. If it be believed that organized offences were rarely known in the Punjab, even in days of Seikh laxity, our well elaborated statistics have since established such to be the case more than the most sanguine could hope, and experience has verified the general correctness of our statistics.

The Punjabee is active and industrious by nature, the physical accidents of his country allow him but small room for choice as to the means of livelihood. The Punjab is by no means as productive as the well watered plains of Bengal, and to secure a remunerative return from its ungrateful soil necessitates constant and well sustained application. When there is a dearth of employment in his own country, the Punjabee does not, as a rule, encumber his poor community by taxing its charity; his restless spirit of enterprise drives him out of his home in search of employment, and if he lives to return from the land of his sojourn, his friends not seldom profit by his venture.

With fewer prejudices, fewer elements of passive hindrance, little or no respect for obstructive traditionary practices, the Punjabee is not averse to those salutary measures of reform of which his unfettered good sense seems to have an intuitive perception. Hence, he of all our subject races is best able to appreciate Western opinions, and hence, he of all our subject races has not only confidence in our honesty of purpose, and in the wisdom and justice of Government measures, but has been ever ready to offer it such help as to ensure success. The important results which have sprung out of this spirit of friendly confidence in the great bulk of the people, cannot be exaggerated. Whether as regards success enjoyed, or success in prospect, this friendly spirit is its best guarantee. It is hardly possible for men whose experience extends only to our older provinces, to believe either in the existence of this powerful moral auxiliary, or in the extent to which it has been rendered instrumental in accelerating the progress and securing the success of Government measures. Let it be recorded to the credit of the poor but honest Punjabee, that he has placed Government under some obligation in return for the many that have been conferred on him. Even in our troubles this willingness on the part of the people to co-operate with us was neither weak nor dormant; long before the Punjabee had experienced the beneficial effects of our policy, his fidelity, so far as passive resistance to extraneous treachery may be so called, drew forth our acknowledgements. When a band of mountaineers attempted to stir up an outbreak

in the Scinde Saugor Doab, so far back as 1851, their failure to draw supporters demonstrated the important fact, that the submission first imposed by force of arms had ceased to be the badge of bondage, and that the rights and responsibilities of citizenship were not likely to be long misunderstood. During the rebellion of 1857 the Punjabees stood foremost among our subject allies; the zeal they evinced in the destruction of the enemies of Government cannot in fairness be wholly ascribed to the love of plunder, which, in certain cases, undoubtedly proved a valuable incentive. When streams of ill escorted convoys incessantly poured from the Punjab into the seats of war, the Government gratefully testified 'that not a waggon was plundered, not a beast of burden stolen, nor a rupee of treasure lost.' Even in the worst days of our trial Government revenue was paid punctually throughout the Punjab, and wherever the emergency warranted a demand in advance, the money was forthcoming without a word of protest.

The Punjab law courts are obeyed with an utter absence of recusancy or opposition of any sort. Resistance of process is unknown in the Punjab. A solitary policeman may execute a process against the proudest chief in the land, and the most powerful brotherhood would not venture to incur the serious consequences of resisting lawful authority.

It is unfair to characterise the loyalty of the Punjabee as 'external,' best observed in 'profession,' or the 'result of circumstances.' The heart of man is inscrutable; man's motives are not always certain. The maxims of the wise are, not to be credulous, not to sleep in security, nor, on the other hand, to be perpetually suspicious. Loyalty is of slow growth even when fostered by sympathy: if a conquered race appreciate our good will, regard our Government with gratitude, and shew a decided will to stand by us in time of danger, the blame should rest with us if a few designing and disappointed men can turn them away from the path of duty.\*

The few who regard our Government with no friendly eye, or with the indifference of unconcerned spectators, are the surviving members of the defunct polity. Brave men of mediocre ability, not unaccustomed to success in war, but strangers

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\* It was false philosophy which tried to explain away Government incapacity by physical influence. Mr. Dorin, in his minute in council, which we quote at second hand, ascribed the evils of which the 'Missionary petition' complained 'to the physical structure of the people'; and asserted that 'nature and climate have at least as much to do with the evils, as any defect in the civil administration of the country.'

to "the not less renowned" glories of peace; once the pride and terror of a warlike Government, they are now doomed to the gloomy retirement of conscious incapacity. By turns the tools of unscrupulous factions, incapable of self-government, and restless in power, they were the men, who, with other kindred spirits, drew their swords to take part in the tragic events of September 15th, 1843; and who, later still, when the Seikh army resolved to indulge in piratical aggressions, were foremost in marshalling the proud battalions of the Khalsas for destruction in the battlefields of Moodkee, Ferozeshuhur and Sobraon. The bulk of the people have little in common with the advocates of anarchy, and wisely prefer the stern rules of property and law to the capricious generosity of princes and chieftains.\*

The most casual reference to a file of civil suits, in any ordinary tribunal in the Punjab, would convince us, that we have to deal with a people unused to intricacies of legal proceedings, that the transactions which form the subject matter of the disputes are themselves of a simple nature, and that for their judicial disposal, a simpler system than that which generally obtained in the older provinces was necessary. We aver on the authority of experience, that not in one such case out of five hundred is the issue one of law; and that not in ten cases out of a hundred is the cause of action more involved than any ordinary matter of calculation may be. Mercantile transactions of considerable value are carried on with mutual confidence and with a dread of legal complications which render their authoritative settlement, when circumstances entail such an unpleasant necessity, a matter of comparative ease. To inflict on such a people laws and regulations, not only complicated and technical, but also obscure, incomplete and uncertain, would naturally deprive our Law Courts of popular confidence, fill the public mind with distrust, and render litigation a mere game of chance. To obviate the curse of such an anomaly, the late Board of Administration resolved that the Law Courts of the Punjab should also be Courts of *Justice*, and that instead of mystifying their procedure by a parade of useless legal formalities 'they should avoid all technicalities, circumlocution and obscurity, and simplify and abridge every rule, procedure and process.' Thus the first and the most important measure which has rendered the Punjab Government both popular and efficient

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\* Or as M. Edmond About observes: 'the good pleasure of any man, however good it may be, is not so good as the code Napoléon.' *Question Romaine*, p. 4.

was carried out in a spirit of honest earnestness, while its subsequent modifications, in accordance with rising exigencies, led still further to its appreciation by the people at large. Few indeed of the Board's Circular Orders have now been preserved in their verbal integrity; but every successive alteration has had for its object public good, and public approval has endorsed every successive reform. By rendering our judicial system comprehensible to the people, we had from the beginning secured such confidence in our administration of the public interests, that in our trial the people willingly acquiesced in the honesty of such 'moves' as were unintelligible to them. 'You have expended lacs,' said an old Seikh Chieftain, 'you have expended lacs in giving justice to the injured, you will not deceive us for the little we have.' Wherever else we may have failed to render our Judicial system acceptable, in the Punjab we have succeeded beyond all hopes. Not the least gratifying feature of our success is the cost at which it has been achieved. We have given to a simple people a system of law simple and effective, and which must fall into very degenerate hands indeed before it can be diverted from its original and righteous use. We have given them a civil code, which embodies the main provisions of the native laws in matters of social and commercial importance, while in the other branches of law it lays down such marked principles as are from their universality easily understood. We have also given them a penal code, not essentially different from that of the North West Provinces, but yet in certain important particulars deviating therefrom according to local experience and the idiosyncrasy of the people. It has worked most satisfactorily; but it was evident, even to the late Board that the good results, to be expected from the effective and zealous aid hitherto afforded by the people to Government in the criminal department, would cease, when our system became unintelligible to them. The chief cause of the unpopularity of the law courts of Bengal and the Provinces is, 'the exaggerated elaboration of their routine and useless ramifications of their legal defences, as distasteful to those who had to administer as incomprehensible to the people.' In our administration of the Punjab the fate of the sister provinces was to serve at once as a warning and a guide. As long as we allow a recourse to law to be a mere struggle with chance, it would be unfair to charge the natives with an inordinate love of litigation. Avarice is usually reckoned their ruling passion, but we seldom find that a love of money and a love of litigation are wedded to each other in lasting harmony. But let what was legal to-day be illegal

tomorrow, let confused and contradictory regulations hold out to the guilty a chance of escape, let us substitute absurd crotchets for necessary technicalities, and uncertainty and laxity for certainty and severity of punishment, we can then realise the fact, that the most covetous people on earth would be tempted to take their chance in the legal lottery, till justice or injustice, as the case may be, deals out to the unfortunate litigant eventual ruin.

Instead of superseding the *lex loci* by a muddle of acts and precedents, 'a Civil Law half English and half native,' the Punjab administrators evinced the greatest solicitude to enlist its invaluable support on the side of government. By adapting our laws to local customs and usages, to such systems of laws as have from time out of mind served as popular standards in matters relating to social economy, we have not only spread general content, but have successfully conciliated the most determined enemies of the new *regime*. In purely social matters the province of the *lex loci* is most extensive, and experience has proved beyond all doubt that in such matters foreign laws, when they have been opposed to the feelings of the people, have done the greatest amount of mischief. Prejudices not opposed to morality, public policy or positive law, which the *lex loci* has tolerated and of which society does not demand the immediate extinction, may be suffered to exist till they ripen, fall, and perish for ever. It is in our treatment of these social peculiarities that in the older provinces we have either been weak to indifference or recklessly severe, or have allowed abstract principles to alienate from us the sympathy of the great bulk of the people. As regards the rules of inheritance, marriage, caste, disposition of property and such like matters, the Punjab code is chiefly the exponent of the local laws. By acknowledging the use and complying with the precepts of ancient usages, which have a hold on the affection and veneration of the people, we have ourselves acquired an influence on their minds, which is calculated in course of time to identify the interests of the government with those of the people, while, on the other hand, wherever we have set aside the principle of discriminate assimilation, we have surrounded our path with difficulties against which our best efforts have proved abortive.

Let it not be fancied however that the Punjab government has carried conciliation beyond its legitimate limits. Though in social transactions local customs have in most cases the force of law, no concession has been made in the treatment of even such crimes as an ignorant people had been accustomed to associate with spurious honour. The spirit of humanity, which so strongly characterizes

our criminal jurisprudence, has been preserved in its integrity in the Penal code of the Punjab, but abstract principles have not been allowed wantonly to outrage the feelings of a people not slow in their resentments. Adultery, which is viewed in the Punjab with a vindictiveness which will not stop short of death, is punished with a severity which cannot be reconciled with the prevailing opinion on social injuries in more civilized countries, while Infanticide which the people had come to regard as almost a social necessity, was put down without the most distant thought of a compromise; it was clearly avowed that government trusted to the rulers of native society to devise the means of suppressing the evil, without allowing them any discretion in the matter. Thus crimes of great enormity, which were allied to popular favour, have been put down all over the province with a resolution that would brave a rebellion. To a great extent we are indebted for our success, to the spirit of self-government common to the village communities of the Punjab. The local government wisely cherished this valuable element in village societies, and, by investing them with a subordinate responsibility, it has succeeded in economising the labour, and in increasing the efficiency of the large body of government detectives. Village responsibility is regarded as an important trust; it has kept village-headmen on the alert, while their personal influence has put down certain classes of offence, to which police vigilance offered no effectual check. The excellent system of *khoj*, or tracking criminals to their homes and haunts, rests solely on the responsibility of village headmen for the good behaviour of their charge. The men who incur the responsibility also enjoy certain privileges; and the experience of the past affords sufficient security for the proper discharge of the duties, as well as the reasonable exercise of the privileges. Any abuse of the privilege or any incompetence in the discharge of the duty, is visited with certain and immediate retribution. Meanwhile it is clear that the local influence of the *Lumberdars* can be so employed in the cause of order, as to offer the most successful and the least obnoxious means of preserving peace and controlling the disaffected.

To this spirit of self-government we ascribe the extensive use of arbitration in the settlement of disputes of a purely social character. It not only materially lessens the work of the Punjab law courts, but in certain classes of civil actions, where the cause of litigation is deeply imbedded in domestic secrecy, it is the only means of offering to the aggrieved parties what the Board of Administration called 'substantial justice.' To this popular tribunal matters connected with local usage

and social practice are chiefly referable, and its judicious co-operation has done more to further to the cause of justice, than any other means which our legislature could provide. The judge should guard against a spirit of jealous rivalry between his own court and this rude tribunal of the people's choice; he should render it an useful auxiliary, and control its operation with a view to justice, but not impair or destroy its utility by circumscribing its functions. The people are generally satisfied with the results of arbitration, and they need not be told that, if we do not dispense with its assistance, it is only because we do not arrogate to ourselves exclusively all offices of usefulness, but try to avail ourselves of every existing means to further the common good.

To adapt our judicial system to the habits of a simple people, and yet to retain the embarrassing technicalities of an advanced system of jurisprudence, would be an experiment so utterly devoid of all hopes of success, that to attempt it would be an act of reprehensible recklessness. To obviate the danger, the late Board found it necessary to eschew technicalities, preferring a just system, even if clumsily worked, to the most elegant machinery in the world for the administration of a crude and a complicated code. Technicalities have an important place in a judicial system, but under the most favorable circumstances they are only preferred to a greater evil which their absence would create. That portion of the law which immediately concerns a man, and which Blackstone considers it incumbent on him to know, is intelligible without the aid of those legal forms and expressions, which grow as social interests ramify and increase in importance, and which alone have placed the interpretation of law in the hands of the few, who have been able to afford the requisite time and attention for its study.

Having eschewed technicalities, to infuse the severe precision of law with the higher tone and larger views of equitable jurisprudence was necessary, if it was our object to profit by the first step in our judicial reform. In England an attempt is being made to make the courts of law and equity grow more into harmony with each other. But the fusion of the two different judicial elements can be of little practical use, unless those who are trusted with its administration are also vested with some discretionary power. Equity implies an exercise of discretion, and when that discretion is withheld, equity is simply impossible. The head of the Punjab administration has always reposed confidence in his subordinates, and has trusted them with that discretionary power, which, if it renders superior control necessary, is also indispensable to equity. By slow degrees the very mode

of exercising discretionary power is being reduced to written rules of procedure, and what was once the result of discretion, carries the authority of written law. After the lapse of a few years we hope to find the Punjab codes embracing more extensive legal provisions, without losing any of their equitable features. It would, however, be foolish to assert that this fusion of law and equity can ever be so perfect, as to dispense with the discretionary power with which we have armed our equity judges.

Wherever equity has been administered without caprice, especially among a people unable to appreciate 'the glorious uncertainties' of our laws, the courts of justice have been popularised, and the cause of Government and order supported by the public voice. We cannot refrain from noticing here one of the happy consequences of public content and confidence in the Punjab Government. In carrying out a measure for public taxation, the Punjab authorities, ever willing to conciliate the people, re-imposed a transit duty to which the Punjabee had long been accustomed, and which had the additional recommendation of being an indirect tax. Its success was not long doubtful: from a fund for the support of the village constabulary and for minor purposes of conservancy the Punjab Octroi became a rich and productive tax, and before its reduction under the new arrangements, it realised a sum equal to one third of the entire land revenue of the Presidency. Yet we have reasons to believe that the introduction of the Octroi into the most flourishing cities in Bengal, would be followed by ruin and desolation. In the Punjab, however, it is a matter of no small gratification, that the success which attended the introduction of the Octroi elicited no remonstrance or feeling of discontent; but on the contrary the call for further increase in the rates of duty was cheerfully responded to by a prosperous people.

The principle of self-defence is nowhere better understood or more readily exercised, than in a country where the submission of individual will to the reason of the community is unknown or disallowed. There every man considers his humble shed the stronghold of his liberty; not because the law of his country has guaranteed him the right of lawful self-defence; but because his strong arm is ready to assert his rights against every individual member of his community, or even against his representative head. The Punjabee is pre-eminently a self-asserting member of society; he has more than once redressed his own wrongs against the powers that were, and the spirit of self-defence is still alive in him. If he is tractable and willing, it must also be remembered that he has been trained in the school of self-defence.

In the courts of his feudal chiefs, where he had unrestricted audience, the Punjabee had been taught the defence of his rights, and he had thence learnt to reject mediate agency as an unsatisfactory arrangement, if not one of actual danger. Of such an admirable trait in his character our Government was not slow in availing itself. The late Board of Administration ruled that the local courts of justice should be open and accessible to the principals themselves, and it was only reasonable to expect, as the law codes had been simplified and adapted to the habits of the people, that with ordinary intelligence every man would be able to defend his rights and redress his wrongs, without confiding them to the mercies of unscrupulous pettifoggers. The admission of professional pleaders as a rule was discouraged in the Punjab, and as the people themselves have shown a strong aversion to their employment, in the few exceptional cases when parties have entertained legal advisers, their choice has not been questioned by the presiding Judge. Among the so-called nobility of the land the promiscuous use of intriguing men as law pleaders has been attended by ruinous litigation; while many a cumbrous file of 'pleadings' would bear painful testimony to the time, patience and money sacrificed in causeless disputes. Since the English laws have armed our judges with summary power, for the purpose of preventing misconduct in their subordinates, the supervising authority of the Punjab officials has not been relaxed in favor of the Punjab pleaders or his sometimes mischievous accomplice, the petition-writer. One peculiarity we may here remark as attributable to national character; while the Hindustani, even under the altered circumstances of the Punjab regime, is never willing to trust himself in a law court without his professional assistant, the Punjabee on the other hand, even when compelled to seek professional advice, can seldom be prevented from taking a direct part in the conduct of his suit, and never feels satisfied till his own words, and not those of his agent, have been attended to by the court. The encouragement offered to the practice of personal advocacy has afforded general satisfaction. It has materially reduced the duration of suits, for the one reason above all others, that principals have no object in prolonging litigation. The same cause has operated in rendering compromise a matter of frequent recourse, for the principals themselves are best able to comprehend, as well as to appreciate their interests, and are not generally willing to sacrifice substantial good to any feeling of fastidious honour, or unprofitable revenge. Personal advocacy has also diminished fraud, facilitated the efforts of the judge to arrive at the

truths of the case, and, without reducing litigation, has deprived it of its many unfavourable incidents.

The law and procedure simplified, the people encouraged in personal advocacy, the difficulty next to be encountered partook somewhat of a physical character. It was necessary now to bring justice to the peasant's door by means of those useful tribunals, popularly known as courts of small causes. When the Board of Administration advocated their introduction into the Punjab, as an experiment, and empowered its Commissioners to vest Tehseeldars with subordinate judicial authority, Indian experience derived from the history of the Moon-siffs' courts was certainly not in favour of the measure. A year afterwards, the hopes of success at first so strongly expressed by the Board had been but partially realised, yet 'much benefit was anticipated from the new courts,' but the reasons assigned in justification of such anticipation it is not necessary to recapitulate here. In the Punjab report for the year 1858, the Chief Commissioner announced that the experiment was no longer open to any doubt, and that its success was an accomplished fact. The Small Cause Courts were organized all over the country, and within such short distance of one another that 'each person 'leaves his house in the morning, promptly transacts his business 'in court during the day, and returns in the evening.' Two thirds of the judicial work of the province was performed in these courts, and both litigants and witnesses were saved the disagreeableness of long journeys to the central courts, where the very fact of an accumulation of work rendered speedy adjudication of suits as impracticable as it was desirable.

Those who have watched the native mind cannot deny that like all half civilised people, they are better contented with an able and conscientious judge, than with the most perfect system of law. This predilection was satisfied by the establishment of the new courts, the judges of which were chosen from among the influential members of the native society. Originally a collector of revenue, the Tehseeldar's fiscal experience gave him an insight into the pecuniary circumstances of the people, which, when brought to bear on the discharge of his judicial duties, proved highly serviceable. His local knowledge, his intimacy with the people, his command of means for searching inquiry would seem almost to defy deception. The people themselves regard his local experience as an effective antidote against any attempt at systematic fraud, while the simple nature and the inconsiderable value of the small causes weaken the motives for corruption, and preclude any sacrifice of justice to the 'uncertainties of law.'

The revised rules of limitation of suits have simplified the only intricate feature in the majority of the small causes, and the success of fraudulent entries in a ledger is a very questionable matter, as regards hopes of ultimate success. The account books are personally inspected by the judge, and the patient scrutiny of collateral points would not long suffer the truth to remain concealed. Should the plaintiff be a man of doubtful veracity, and the subject matter of the suit be simple accounts, his books are submitted for the inspection of arbitrators, who have to verify every single entry, *seriatim*.

Nor is there any dearth of means to check corrupt practices in the judge himself. The facility of appeals and a constant inspection of his work by the appellate courts render it almost impossible for incapacity or dishonesty to pass unnoticed. It is also enjoined on the small cause judges not to record an *ex parte* judgement, unless there be distinct and undeniable proofs of contumacy on the part of the defendant. If an instance to the contrary occurs, it is incumbent on the court on the appearance of the defendant and a declaration of the merits of his case, to proceed with the investigation *de novo*. Other salutary checks have been imposed on these courts as regards their power to interfere with the award of arbitrators; the judge may confirm an award, but all cases of dissent must be referred to the district officer for final orders. Thus every attempt to exercise arbitrary authority is immediately overruled and the conduct severely censured, sometimes even punished by the forfeiture of judicial powers.

Thus far the Punjab system of government with its simplified codes and popular law courts, would be found to contain elements of considerable danger, in the absence of direct superior control, and the check of constant official vigilance exercised in correcting the slightest aberrations from the broad principle of justice and equity. The system of government is perfectly oriental and has the one inherent defect, that it cannot be worked by fools. Its simple judicial machinery may be converted into an inquisitorial instrument for the gratification of party feeling, if not of individual spite; discretionary power instead of being employed for furthering the objects of equity may degenerate into license, and the useful delegation of judicial authority to a large staff of subordinate functionaries may only create petty despots whose exercise of power would be but very slightly leavened with a sense of justice.

The extraneous checks we have just alluded to are the sole, but certain guarantees, that the dangers which may be apprehended shall not be realised, and it is a fact that new restraints are being

imposed, with a view still further to guard against inherent dangers. Before however, we speak of official vigilance, we shall offer a few remarks on two other subjects with which it is closely allied: we refer to the accessibility of the Punjab officials, and the triple powers vested in such as are intrusted with the administration of public justice. It will be generally admitted that the highest Punjab officials are free from the arrogant reserve, and the hauteur of office which hedge round the most humble native 'deputy' of the Provinces. We are not required to demonstrate a fact, which the most casual visitors in the Punjab have not failed to remark. The Punjab Government have never ceased to remind their judicial subordinates, that accessibility, when coupled with conciliating firmness, has gone further in promoting public content and individual popularity, than the most learned and elaborate decisions in law; they have also been apprised that, though zeal and ability shall ever be acknowledged by the head of the government, a feeling of false reserve would go far to destroy the value of public efficiency, and that the most effective method for popularising the Government is for every public officer to acquire the respect and regard of those, over whom he has to exercise authority. In the discharge of political duties too much importance cannot be attached to the personal influence of Government employés. Every public officer in the Punjab is more or less conversant with the habits and character of the natives; he is able to allay inquiry, to appease excited feelings, and, to some extent, to become the confidant of the people. A free intercourse with the natives and the maintaining of a friendly bearing towards them have engendered confidence in the natives towards their official guardians.

It would require very little time for an observant mind to convince itself, that despite the popular condemnation of native honour, the natives at least of the Punjab are ever ready to act honestly by those whom they believe to be honest and sincere towards them. In the Punjab a Government actively interested in the public welfare has been strongly supported by the public voice, and the Punjabee has good reasons to be assured that the Government is paternal in its acts no less than in its professions. Painfully aware of the studied indifference with which he was treated by the chieftains of his own race, the Punjabee naturally feels grateful to his alien rulers, who have devoted no small amount of means and energy in promoting his welfare. Thus, he has been attached to his Government for reasons the force of which even the most selfish acknowledge, and he has been always

willing to forward the cause of Government, not less with a view of promoting general good, than from a sense of duty. He is not ignorant of the fact, that his official protectors are unwilling to hand over his safety to the charge of the native court functionaries. He has ever shewn a steady and well grounded distrust of the honesty of native ministerial servants; the days of the Kardars are not forgotten as yet, but the Punjabee is willing to trust his cause to that sense of justice in the higher authorities, which he has never failed to find in them. Even if he has reasons to doubt the abilities of the European officials, his confidence in their honesty of purpose continues unshaken.

It may, however, be suspected that in cultivating popular good will, we are engaged in a fruitless, thankless task, or one involving a sacrifice of dignity. On the contrary we have reason to congratulate ourselves, that our success in conciliation has been obtained at a cost remarkably disproportioned to the good achieved. The Punjabee has no cause to complain of neglect; if his distrust of native officials be justified by facts, at all events he finds justice when he appeals to those who are armed with more extensive authority. The accessibility of the Punjab officials has proved a strong check to the corruption of the subordinates in all departments. It has also succeeded in suppressing that provoking spirit of domination so common among police myrmidons, which a sensitive people are much more unwilling to bear than even pecuniary loss. It is the supercilious treatment of the non-official classes of natives by their brothers in office, that men of influence and respectability dread, and they are willing to put up with any sacrifice rather than the indignity to which they would be liable from this source. The large body of native ministerial servants, including the police and servants of a like grade in the public offices, have in some places been countenanced in their cruel treatment of the poorer classes of their fellow countrymen. In the Punjab, however, they have experienced a fate which no doubt they regard as painfully oppressive; they have arrived at the conclusion that if there be any prejudice in high quarters as regards their relations with the people, it is decidedly against them. The proof of innocence as a rule rests with them, and no bias in their favour tends to facilitate the task of successful vindication. To the credit of the Punjabees we may remark here that, aware as they are of the readiness of every officer to inquire into even a whisper of complaint, Government servants as a body have had no just cause to complain of any combination of the people against them. It is certainly desirable

that some sort of moral control should be exercised on the conduct of a large body of men neither scrupulous, nor much given to kindly feelings.

If official accessibility secured no other good but the one most patent to every common observer, that of adding to the local experience of our public servants, it would be a political trait worth cultivating. 'It is necessary' said the Chief Commissioner, 'that the judges in their various grades should not only know something of the European jurisprudence, the Indian regulations and the Oriental system of law, but also that they should have some insight into the usage of trade, the practice of the landholding community, the tenets of the Seikh sect, the manners of the hill and the frontier tribes.' It is this knowledge of the internal social economy of the people that inspires popular confidence in our judges. Sometimes it has a direct influence in diminishing crime, and promoting the cause of justice, while with certain warlike clans of the frontier, our officers have acquired a patriarchal influence, which can only be traced to their local experience.

Judicial officers in the Punjab can not only take cognizance of matters civil and criminal, but have a concurrent jurisdiction in matters relating to the finance of the country. On this policy it is impossible to effect a compromise with the advocates of the English system. Loud in their condemnation of triple authority, they have gone so far in their wrath as to condemn their opponents without a hearing. They either argue on abstract principles, against which we do not mean to contend, or they reason on facts which refer to a different state of society. We do not regard the triple jurisdiction as an anomaly, and in defence of its place in the Punjab administration, we appeal not to plausible theories but to the secure logic of accomplished results. The fears entertained of 'an union of the magistrate and the policeman, armed with all the power of an infinitely corrupt executive, and the collector, the servant of an unscrupulous government, in one and the same person,' have not as yet been justified by facts. While the extremely hypothetical case of collector A taking a fancy to our land, and appealing to policeman A (himself) for assistance, and eventually handing us over to magistrate A (himself again), has not as yet had a *de facto* existence, nor do circumstances warrant any such fears, despite the abstract plausibility of the case. If the Madras Torture Commission could arrive at the conclusion that 'the police and revenue duties being united in the same person was a great cause of the oppression and cruel tortures, which they found to be

'prevalent,' we aver that the cause of the evil had not been reached, though a collateral and influencing circumstance admitted of being exaggerated into the semblance of it, and we offer to the Commission the instance of a happy exception to the rule, in the good which the union of the two duties have effected in the Punjab for the last thirteen years.

Instead of perplexing an ignorant people with a multitude of courts of different jurisdiction, it was wisely resolved that the three jurisdictions should be exercised by the same court; thus affording speedy redress for every grievance and securing certainty of punishment. Needy suitors have not been long in appreciating the facility the system offered them against those with whom time and money were matters of secondary importance. Whatever their complaints, the remedy was always at hand, and although they have acquired a superficial knowledge of the different characters of the injuries redressible by our courts, yet neither their acquaintance with legal proceedings, nor their several necessities would warrant a division of the triple jurisdiction into distinct tribunals. That division of labour may be practically useful, it must be proportionate to the demand for the objects on which the labour is employed. In the Punjab it is the nature of the legal remedies, and not the extent of the demand for them, that justifies the union of the three powers in one individual, rather than their division into three different and distinct courts. Happily no doctrinaire clamour has been able to hamper the Punjab authorities in providing for the wants of the people; and it is some justification of our views, that in 1837 Lord Auckland reluctantly separated the offices of magistrate and collector, and that some of the then influential advocates of the measure have lived to regret the policy they had so unluckily succeeded in carrying out.

The union of the triple powers has expedited the dispatch of business, not less than it has contributed to the experience of our judicial officers. An intimacy with revenue work has instilled into them a spirit of elaborate scrutiny, and judicial experience has given revenue officers a character for decision. In the older provinces the sudden translation of officers from one department into another takes place at the simple fiat of the head of the local government. Howsoever distasteful the new work may be to him, howsoever conscious he may be of his inability to afford satisfaction in the discharge of his new duties, a criminal officer has not the least choice in the matter of his translation to the civil department. After years of experience in a criminal court, and with a contemptible ignorance of financial intricacies, a

magistrate finds himself metamorphosed into a collector, and before he has succeeded in acquiring even a knowledge of the initiatory principles of his new work, he finds himself gazetted civil judge. Sometimes he appears before the astonished public as a full fledged Post Master General, or even a Director of Public Instruction!

What alone was necessary to ensure success to the working of the Punjab system, was a watchful vigilance on the part of the superior appellate authorities. The exercise of triple powers, unless controlled by strict supervision, was likely to result in anarchy. The means adopted by the Punjab authorities to put down irregularities, though simple, has hitherto succeeded admirably. Triple powers have necessitated triple supervision; while provisions were made to enable the commissioners to control district operations, the district officer himself was authorised to revise the work of his subordinates without waiting for appeals, and to correct irregularities by the exercise of that summary power which was vested in him for such emergencies. In Bengal the public journals have not ceased to regret that the only means of redress against the official eccentricities of the 'boy magistrates,' was by the long and tedious process of appeal, a process which has done less than even the little that was expected of it. Inexperienced assistants in the Punjab have but a very confined sphere of mischief; caprice and honest eccentricities are alike condemned; good intentions are an excellent sedative for a disturbed conscience, but the public has a right to demand an explanation for even mistaken zeal. When an assistant has monthly to submit the abstracts of his work to the Commissioner, and every case of irregularity is immediately condemned, and sometimes with a rigour which to most men may appear unnecessary, there is not much chance of serious error. Thus, while the divisional officer obtains an insight into the working of his districts, he has ample opportunities to give his assistants hints and suggestions, which none but the most headstrong would consider beneath his attention.

One result of this strict superintendence has been happily illustrated in the administrative capacity which young assistants have evinced, under a Government jealously watching 'the acts of authority.' Without imperilling the cause of justice, the union of the three powers has saved the people no little embarrassment economised time and labour, and armed public officers with self-reliance. The Board of Administration were so well aware of the danger which threatened their system of Government, if laxity of discipline was not scrupulously guarded against, that

they were never slow in cultivating a spirit of vigilant application in their subordinates both in the conduct and control of business. It was the *sine quâ non* of a system that could not be administered by fools. With able and willing men, good rules are almost superfluous, while with such men as cannot be impressed with a proper sense of duty they are ineffectual.

The machinery of the Punjab Government is no doubt very simple, and of necessity, those who are entrusted with authority under it must also be entrusted with considerable descretionary power, and if in the exercise of this important function they betray the least apathy or indifference, no amount of new rules would save the Government from immediate collapse. An appeal was made to the good sense of every public officer engaged at the inauguration of the new system; and how ably it has been responded to is placed on record. A simple people, unassisted by professional advisers in their recourse to law, naturally constitute their judges counsel for both parties to a suit, and in conducting his complex and onerous duties, the Punjab judge has to throw his whole mind into the case, 'thoroughly to realise to himself the position and feelings of both plaintiff and defendant, the authenticity of documents, and the probabilities of the case.' And unless all this is done, recklessness and not justice would characterize the proceedings of the Punjab courts. Under such circumstances the judge is *de facto* an umpire before whom the parties are to lay facts, or rather what they consider such, and who has to attend to the legal requirements of the case independently, in a great measure, of the parties themselves. He may demand additional evidence, when necessary; he has to test its relevancy and weight, and it is by no means optional with him to close investigation with only such facts as have been brought to his notice. It is the wish of the Government that, to the best of their ability, the Punjab judges should bring to light every fact relevant to the case under investigation, and no amount of ignorance in the parties to the suit would justify any neglect of the course prescribed for judicial guidance. Should any evidence of value be available, but yet withheld in ignorance of its importance, it is the judge's duty to inform the party of the best means of furnishing it. He is not, above all things, to allow either of the parties to the suit to suffer from ignorance in applying the law to his particular case; he should consider it his duty to furnish the required legal information, any such involved duty being altogether his own. It is his duty to save the unwary cultivator from the extortionate mahajun, and to place the borrower and the lender upon a footing of equity and comparative equality. The majority of those who seek his

court are neither intelligent men nor well to do, and he must protect them from the designs of the intriguing and the wealthy. Those who condemn what, perhaps in irony, they call the paternal system of government, ought to bear in mind that we advocate its adoption only in such states as are yet in their infancy, and would most heartily condemn its introduction into a highly civilised society, where the lower classes share in the honor and responsibility of the government. The duties of a judge, when coupled with those of an umpire and a general advocate may entail an increase of work on the individual who unites in himself the different functions. But working, as he does in the Punjab, with the principals themselves, and armed as he is with a certain discretion in all matters before him, his labour is materially lessened and would hardly ever justify haste or slovenliness. Where the parties do not make statements to confound inquiry, but rather to elucidate what each considers the strong point in his case, the means of ascertaining the truth cannot generally be a matter of any great difficulty.

Not the least satisfactory result of official vigilance is the reduction of the costs of suits; while redress is available at a small price, unscrupulous litigation is a losing concern. With this fact the people at large are much more gratified, than even the dispatch, with which actions at law are disposed of in the Punjab. The reason for this preference is obvious; an ignorant people have but a weak appreciation of time, while the tangible form which power assumes as money, makes a more direct appeal to their senses, and lays a stronger hold on their convictions. Yet in an age like ours it would be impossible to exaggerate the value of judicial dispatch. Among the more serious evils of life, Hamlet reckons the 'law's delay.' Some of our novelists have dwelt so long on this subject as to exhaust their stock both of facts and fancy. Though we are no advocates of 'telling descriptions' in books of fancy and fiction, when their force chiefly lies in exaggeration, yet in some of these unsparing exposures there is much more of truth than at first we are willing to admit. It is, however, the boast of the Punjab Government, that without endangering the interests of the litigants, it has succeeded in instilling a spirit of dispatch into its law courts, which may with advantage be imitated in the regulation provinces of the three Presidencies. Whenever much has to be done and must be done, a habit of dispatch is indispensable; a large daily allowance of work soon drills the most unwilling labourer into active and industrious habits. If it be true that the Punjab officials are comparatively the worst paid body of public servants, it is not less true that

they are the hardest worked. Five hours of drudgery at the desk is only an ordinary day's work in the Punjab, but that means are being adopted to facilitate its labour is well known. In the law courts, the means already at work have proved effective, and are increasing in number and efficiency: the suitors who prefer personal advocacy are not inclined to countenance delay, while the court procedure is being continually simplified. Long winded and irrelevant exhibits are done away with, complimentary phrases and equivocal blessings condemned, and thanks to the efforts of the learned gentleman who presides over the judicial department disallowed. Every document in a suit, from the initiatory plaint to the final order, is confined to the gist of the case, and all redundancies, the 'limbs and outward flourishes' of the old procedure, are carefully expunged.

By such facts alone can we explain the results tabulated in the different Punjab Reports that, in 1854, the average duration of suits in the Punjab courts was 28 days, in 1855 it was only 23 days, and with but trifling variation it continues as low, down to the last report before us. In criminal cases, the average duration with the aid of police, was eleven days; and before the Magistrate alone, six days only.

The *Friend of India*, commenting upon the Annual report for Bengal for the year 1855, observes; that 'it supplies facts which 'rightly comprehended, would smash any Judicial system in the 'world. What an extent of misery and vexation, interruption 'to commerce and insecurity of property, do these two tables 'represent. The total value of the suits pending in the civil 'courts, on the 31st December 1855, was

Original suits, ...	...	...	Rs. 35,713,544
Zillah appellate Courts,...	...	..	2,167,274
Sudder Court, ...	...	..	14,796,832

Total... Rs. 52,677,650.

' While the average delay in the decision of a case, was

			y.	m.	d.
Sudder Courts...	...	...	1	3	4
Zillah Judges...	...	...	0	11	3
Additional Judges	...	...	0	9	14
Prin. Sud. Ameens	...	...	1	0	14
Sudder Ameens	...	...	0	9	6
Moonsiffs	...	...	0	6	26

' That is, the ownership of three and a half millions sterling 'was kept in suspension for an average period of six months. 'A million and a half remained useless for more than twelve.

‘These figures reveal but a portion of the evil. We do not exaggerate when we say that a sum equal to the entire land revenue of Bengal, is rendered useless for a period of two years, by the delay of our Civil Courts.’

On no other political topic can we be more at variance with the advocates of the English system, than as regards *centralization*. Its opponents have so long contemplated centralization in connexion with its worst and exceptional results; they have so long associated it with despotism, laxity of discipline and general inefficiency, that we have no reason to wonder at their unqualified condemnation of the policy. Those, however, who willingly incurred the responsibility of its introduction into the Punjab administration, were also aware of its tendencies and adopted measures of stringent precaution to ward off the dangers.

For centralization to be useful it must be coupled with undivided and direct responsibility; it ought not be overburdened with work, and the centralized powers must be vested in men of tried and acknowledged efficiency. In the absence of any one of these three conditions, centralization would inevitably realize more than its deprecators have prophesied of and against it. If coupled with irresponsibility, it must be despicably impotent if it did not invoke the aid of an inquisition against personal liberty, and if exceptional cases may be cited to the contrary, it would be just as well to bear in mind that all Governments are based, or ought to be based, on principles generally and not exceptionally good.\* When hampered with more work than warranted by necessity, those who are trusted with centralized powers must either sacrifice excellence to expedition or sacrifice both in trying to effect an impossibility. On the other hand, when centralized powers are reposed in men of deficient energy and intelligence, they may be converted into the tools of designing and irresponsible hangers-on.

With a staff of coadjutors adequately large, indivisible responsibility and the districts favourably apportioned among them, the Deputy Commissioners of the Punjab have worked with remarkable success. The Deputy Commissioner, is the chief civil judge, the chief magistrate and the chief revenue authority within his district, and is held individually responsible for the satisfactory discharge of his complex and onerous duties. The

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\* Of reasoning from exceptional cases, Lord Jeffrey observed: ‘They may be of use sometimes to test an abstract proposition; but, as makeweights in a practical question, they are absolutely contemptible.’ Lord Cockburn’s *Life of Jeffrey*, Vol. 2, p. 355.

Deputy Commissioner is responsible for the peace, content and prosperity of his charge; and it is incumbent on him, as far as practicable, to supervise the working of the three departments over which he has sole and undivided authority. Any attempt on his part to transfer the responsibility from his own shoulders to those of his subordinates would betray a want of controlling power, for which the presence of no other administrative quality would compensate. His immediate coadjutors are in every way amenable to his authority, and, if the public interests suffer from official neglect, the Deputy Commissioner is the person principally answerable to the Government, while the responsibility of his subordinates is, under most circumstances, completely ignored. 'He is the authorised exponent of the political position of the Government, as well as of its law and institutions.' His official position is one of no embarrassment, if it be properly understood; there are no conflicting elements for him to combat, and with a little tact he may command the most active co-operation of his assistants.

In the older provinces, 'the Judge moved and breathed the same social, but a different popular and official atmosphere from that of the collector, and their *sets* revolved in separate systems.' But the Deputy Commissioner in his own district is 'the referee in every matter, domestic, social, or public.' He is looked up to by the people as their advocate-general; they cannot set him as a magistrate against himself as a collector, or as a collector against himself as a civil judge; while the fact of his being in every matter of importance their first and chief adviser, goes far in establishing that feeling of mutual confidence, which we have already treated at some length.

The Deputy Commissioner is, however, well aware that though he is entrusted with authority over his assistants, he alone is responsible for the due exercise of that authority, and that any unnecessary interference with the work of his subordinates, or any attempt to dispense with their assistance in the general management of the district, would not add to his power or responsibility, but would be followed by an embarrassing accumulation of work, which would leave all hope of a successful administration out of the question. Under such circumstances it is indispensable that the authority of the district officer should, by mutual consent and a friendly understanding, be shared by his assistants, preserving unimpaired the responsibility of the Chief, but saving him vexatious labour and petty difficulties.

It is impossible for us to overlook the fact, that the proportion of European to the native officials in posts of trust and

responsibility, is much greater in the Punjab, than in any other province of the Indian Empire. European official agency has led to certain and decided success; there is more energy displayed in European management and much more confidence generally inspired by European officials, than by even the most tried native.

The spirit of economy, which has characterised the Punjab Government, contrasts favourably with the approved prodigality of the older provinces. In the Punjab a longing for retrenchment seems to pervade the whole administration; the head of each department considers it his duty to supervise the expenditure incurred under his authority, and competition in economy is not less rife among the Punjab officials, than a struggle for administrative honors. Now and then misguided zeal bears its usual fruits, but on the whole the general tone of management improves with the love of thrift and a will to check profusion. In fact, it is one of the most reliable securities for a continued surplus for the Punjab Exchequer. The authority of every officer to disburse public money is so well defined, that no deviation from prescribed rules is permitted without severe censure. Whenever an instance of infringement does occur, the financial representative of the government is ready to provide stricter means of control for the future. Existing establishments are being continually revised and adapted to the exigencies of the different departments, while the check on entertaining new establishments is still more perfect. Extra hands cannot be employed for ever so short a time without superior sanction, in obtaining which, the most lucid statement of the necessities for the additional outlay is required, and should such explanation be deemed unsatisfactory, sanction is always withheld. As for the cry for more hands, we cannot refrain from quoting the words of the then Financial Commissioner Mr. Cust, who strikes at the root of the evil by a candid avowal which we endorse. 'I trust in a few years to see the number of employes sensibly reduced, and the salaries of the remainder increased. *I may be bold to say that the real cause of the evil is that the District Officers are imperfectly informed of the details of their own office; they have not made a careful diagnosis of the disease; they are frightened at the symptoms, and dare not apply drastic remedy.*'

Of all our legislative failures, none have proved so pernicious in their results and so thoroughly and hopelessly false in their scope, as the provisions regarding property in the soil. In certain places the system itself was irreparably defective, in others, the

defects of the judicial machinery left no hopes of fair play for even a tolerably fair system of land government. We regret that in the treatment of property in land, the Punjab Government have not been able to avoid the failures, which have so unhappily characterised similar efforts in the other provinces of the empire. If the Punjab view of the land question be not radically mistaken, it is still one which we cannot recommend for a wider application.

Though the settlement of land revenue has conferred a great blessing on a people harassed by an uncertain and heavy land tax; though the definition of rights and liabilities cannot but lead to the promotion of peace and order; though the land tax has been fixed with due regard to the condition of the people and local peculiarities, yet the various reductions made in the Punjab settlements from time to time, and the reductions still not unnecessary in certain places even if not loudly demanded, argue that we have failed to attach due importance and interest to property in land. It has been admitted by one who has devoted considerable time to the study of the subject, that in not one single district of the Punjab 'has the assessment of Government revenue been too high either for the quality of the soil or the industrious habits of the people, but as regards the inducement for land-cultivation, the assessment has in some places been certainly exorbitant.' Reductions have constantly been made of late years, but it is any thing but satisfactory to admit that reductions are only made by degrees, leaving less and less room for discontent. The Punjabee is strongly attached to the soil, but a more favorable tenure of proprietorship, than possession for the term of a short settlement, is necessary to attach him still further to his holding and to make him value it on other grounds than mere traditionary rules.\*

To 'promote the future ease and happiness of the people' Lord Cornwallis proposed to make 'land the most desirable of all property, and direct the industry of the people to those improvements in agriculture, which are as essential to their own welfare, as to the prosperity of the estate.' How under the most unpromising circumstances, with a judicial system universally condemned, the perpetual settlement advanced the prosperity of

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\* Mr Governor Bayle's report on the West Indies published *by authority* is a valuable repository of facts for political economists. After some general remarks on the character and conduct of the negro population of the West Indian Isles, Mr. Bayle dilates at some length on the love of the soil inherent in the negro races, on their want of moral resolution and physical energy and observes that working as absolute proprietors, 'they toil more constantly than they ever would consent to do under any other sort of inducement.'

Bengal need not be dwelt upon here. To render land valuable, the ownership of it must be certain and unconditional; if 'the charm of property,' be nothing better than an idea, we must not discard it as an useful auxiliary in stimulating industry. What the government may a century hence lose under the perpetual settlement as regards direct taxation, it would more than recover by what a contented and prosperous people would willingly contribute to the imperial exchequer by means of indirect taxation.\*

In the Punjab we have also erred in another direction: unnecessary interference with the right of alienating land has deprived land of much of its value as legal security; monetary transactions are seldom conducted on the security of land, and the results are just what might have been predicted. We should no more hamper the right of alienating property in land than property in money or in any other object of use. The few and simple rules devised by law for the preservation of property in land have hitherto been found perfectly effectual, and the necessity for more stringent rules is more fancied than felt. The right of alienation inherent in absolute proprietorship, ought not to be restricted by an unreasonable partiality for any particular description of property. It is not alienation of land *per se* that the natives regard with distrust and displeasure; but it is that unjust alienation which even when sanctioned by law does not fail to sink deep into their feelings, and which engendered a deep, unforgiving hatred, not only for those who caused the mischief, but also for those who countenanced it by legal warranty. In the Punjab, where the law courts are popular and effective, all unjust and forced alienation of land should be watched with jealousy, and instances of fraud exemplarily punished, but as regards the right of alienation itself, property in land, like property in gold and silver, should follow the will of the proprietor. It may be consistent with the benevolent views of our Government not to eject Government debtors from their holdings, till assured of hopeless insolvency, for the mere possession of land, without the means of utilitising it, is in itself a serious evil,

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\* The ryotwari system of Madras, repulsive to the instinct of the people, has completely ruined landed proprietors in that presidency; the village system of the North West has been remarkably favorable to the growth of general beggary among the peasant proprietors, and has necessitated the transfer of landed property from the poor to the rich, and not seldom in that questionable manner which has for ever set the labouring classes against the capitalists. It is however in a permanently settled country like Bengal, that land has a fair value, and where despite the courts of law and a faulty system of government 'the ryots are better fed, better clothed and housed, than those in a similar position either in the Madras Presidency or in the N. W. Provinces.'

and has given rise to a novel and important political question in our Australian dependencies.\* Neither is it repulsive to the principles of equity, that only as a last resource should a helpless tenant be ousted from his hearth and home to satisfy the judgment debts of an exacting creditor; but all *bond fide* alienations of land should be perfectly free, and, to our judgment, the subject is one of too grave an importance to be sacrificed to any traditional prejudices or feelings of mistaken philanthropy. Let us deprive the right of alienation of its objectionable features, and the prejudice against it will also disappear; but to stunt growth for fear of probable disease augurs ignorance of physiological laws.

If we cannot deny that landed property has a tendency to pass into the hands of the moneyed classes, it is impolitic, nay even unfair, to check the tendency by legislative enactments. Let us guard against oppression, let us put down all attempts at fraudulent alienation, and leave the rest to the option of the transacting parties. Why should not we stop the growth of capital among the trading classes if it be a matter of necessity to guard against their acquiring property in land. Why should a man be more dangerous to his bretheren if he owns ten thousand acres than if he owns ten thousand pounds? Why should we check the growth of one of the means of power and not another? Why allow the owner of land to be helplessly in the hands of the owner of money, and yet struggle to keep the owner of land in possession of his land? We must confess we do not view with any dread the transfer of landed property from the poor to the rich, provided the conveyance be optional and equitable, while the rich must ever seek the labour of the poor, the poor stands in need of the capital of the rich, the harmony is perfectly natural, and those who would attempt to improve or alter the economy of nature, have much to answer for their meddling spirit. It is not for us to set the poor against the rich, or ever to forget that we are called upon to judge their mutual relations and not to advocate the cause of either. If we warrant unjust alienation of land by the sanction of law, we abandon the vantage ground of a judge, and ally ourselves with one of the contending parties as his advocate. That under proper guidance the two classes can work in harmony, the records of the Punjab courts fully establish. No intelligent officer who has presided in any of the ordinary tribunals in the Punjab, for even a few short months, could have failed to

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\* For a popular exposition of the *Land Question* we refer our readers to General Mundy's '*Antipodes*.' Chap. XIV.

remark the good will that generally exists between the classes whom we usually look upon as waging eternal war against each other. He must also have remarked, how the needy cultivator has taken the well to do *Mahajun* out of court to compromise the suit, rather than harass his *Shah* by contesting the claim. If the Punjab law courts continue as we now find them, there is little to dread from the assumed feeling of antipathy between the man who lives on his capital, and the man who lives on his labour.

We cannot more appropriately conclude a summary like this than with a few words on a subject, which, if apparently of a speculative character, comprises the very essence of political success. We allude to what a writer of distinction has felicitously styled *the vitality of a Government*. Some have attempted to prove its identity with the aggregate of those commendable features in a Government which contribute to its success; admitting, that they operate to a certain and limited extent in sustaining political vitality, we deny all identity between them. Indeed, it would be just as reasonable to affirm that, food was identical with health, or that it alone could produce physical harmony. Official accessibility and vigilance, active but cautious centralization, triple powers, simple law and procedure, are mere dead letters if political vitality be absent; it would be unreasonable therefore to persist in the attempt to prove that they are identical. The anatomist who examines the structure of the arm of a full grown man and of that of a child, discovers in the one evidences of power, in the other comparative helplessness; but without vitality the physical formation of neither answers any useful purpose. Political vitality, like vitality in the human body, is alone capable of converting into use the different means and appliances placed at its service by circumstances, or the incidents of existence. As youth from its growing vigour is best able to rough the evils of life, so does political vitality render a Government fit for those trying ordeals which test political virtues. Without political vitality The Empire of Rome perished even with laws and institutions, which the accumulated experience of nearly fifteen centuries have scarcely been able to improve. With a comprehensive system of equitable laws, a civil jurisprudence carried almost to perfection, the Roman people submitted to the indignity of a consul from the imperial stable. In our own days we witness the melancholy spectacle of two warlike people, once the leaders in war and conquest, steadily sinking into contemptible imbecility, with institutions but little altered, indeed apparently improved, since their palmiest days.

Political vitality consists in the directing impulse and the fostering care of the head of the Government; where the influence of the chief is uniformly felt throughout the various departments, the government is sound in all its parts, and can extend life and vigour to its most distant members. Where this influence is circumscribed or impeded by obstructing causes, we may safely infer that the political body is unsound, and the inference is not seldom justified by the appearance of topical disorders, which by degrees infect the whole system.

Political vitality consists in proper organization: when the different departments work in harmony, and are able to give design and coherence to individual energy. It consists in what the present head of our Indian Government has called 'the holding well in hand of a Government,' which renders even an accidental opposing influence weak, if not abortive. When the different departments which constitute a Government are opposed to each other in their operations, the directing influence of the head, however well exerted, cannot but fail of good effects.

Political vitality consists in the emulative energy of such of the governing subordinates, as are trusted with the practical details of the administration. This emulation is engendered by intelligence, and a sense of duty, and promoted by that equitable test which the head of the Government applies to every individual subordinate, and which renders reward not less certain than censure. It is not only their emulation but also their self-reliance that conduces to political vitality: it is in self-confidence, when intelligence is not wanting, that the power of originality is inherent, and without this power progress in Government must ever be a delusive dream. Men are only too apt subserviently to follow rules and to abandon freedom of action.

Where 'a Commissioner himself is a slave, a handsomely paid 'slave indeed, but one who dare not express any opinion of his 'own, and who must think as he is ordered to think by the 'head of Government,' it is clear that the presiding authority is either weak, or hampered, but unfortunately strong enough to smother independence of action in its subordinates. A Government so unhappily constituted must yield everything to a routine which would provide ease and seeming regularity, while the standard of excellence would, in course of time, be brought down to the undisturbed level of withering mediocrity. From this political peril, the Punjab Government has nothing to apprehend, and we trust all approach to political stagnancy will be scrupulously avoided.

Another fruitful source of political vitality, is the influence of a free press. It may seem strange to remark here that nowhere in India has the agency of the fourth estate been so successfully employed for political purposes as in the Punjab. Even the local native press, so contumeliously treated elsewhere, is the ally of the Government, and if there be not inducement enough for the different interests to have each an organ of its own, the local public journals, such as they are, have never failed to exercise a salutary influence in suggesting public improvements; and no such suggestion has ever been set aside, merely because it emanated from the exponents of public opinion. During the late rebellion, the local journals in the Punjab were for good reasons taken into the confidence of the Government by the one man above all others who never shirked responsibility. The public prints were furnished with early and authentic intelligence from the seat of war, and were trusted with the exercise of such discretion, as would save the local Government from any embarrassment on account of the support it offered to the public journals. The policy of the late Company was to treat public opinion with supercilious contempt, and to try to evade criticism by an assumed appearance of indifference. But even the most determined, and certainly not the least talented public opponent of the 'patriarchal system,' remarked in a spirit of good humoured irony that, 'the difference of the respect in which the governing powers are held by interlopers and other "sweepings" in the Punjab and Bengal 'shews the extent of the error committed by Sir John Lawrence' in suffering any intimacy, or connexion, between the local government and the local press.\*

The Punjab government is a government of reforms; it owes its existence to reforms, and it has maintained its character as a reform government by a relentless repudiation of exploded theories, though deeply rooted in the official mind. The Punjab government is a government of progress and development; it repudiates vague theories and rests its claims on accomplished facts. It has consulted and provided for existing necessities, without having given any embarrassing pledge which would confine its choice of future action. While the governments of the older provinces seem to have lapsed into a state of inanition after a few years of usefulness, the Punjab government bears from year to year undoubted evidence of continued and well sustained progress. Its administrative

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\* *The Dacca News.*

machinery does not pretend to any learned elaboration ; simple of necessity, we doubt not, it will adapt itself to higher necessities when an advanced state of civilization brings them into existence. The principle of the Punjab system of Government is not only to avoid legislative bigotry, but also to guard itself against legislative anachronisms. While a state of stupor is inseparable from tardy legislation, premature enactments, which as a rule must be attended with failure, are naturally calculated to fill the public mind with disaffection and an unreasonable dread of all reforms.

The public mind is too apt to dispense with calm reflection in the presence of danger, and every reform falling out of its time, and failing in consequence, is calculated to prejudice the cause of reform in general, while each successive failure serves to confirm, more and more, the public apprehension. Every reform to a certain extent partakes of the nature of an experiment, but when reforms are viewed with dread and alarm, the public mind is unwilling to trust even to a favorable chance ; and a scrupulous attachment to dead certainty is a weakness which legislative anticipations are only too likely to increase. In the Punjab the Government deals with necessities as they arise : avoiding on the one side stagnation, and on the other a feverish struggle for reform.

Of the Bengal government it was remarked that they 'seem in all their schemes and plans to be at least two hundred years behind the age, if we compare them with England, and fifty, if reference be had to the natives of the country.' But if the Punjab government were ever to fail in adapting itself to an advanced state of political and social existence and in providing for higher necessities, it will have renounced the principles of government it avowedly and so successfully pursues now. As long as it retains political vitality, there are no just grounds to apprehend that it ever will abandon the principle of assimilation, of gradual and necessary progress. These principles, the exclusive property of only such Governments as are destined to a prolonged existence of usefulness, we hope will not be abrogated by any false philosophy that hereafter may be brought to bear on the Government of the Punjab, this is perhaps its greatest danger.

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ART. II.—*Annual Report of the Administration of the Straits Settlement 1860-61.*

CERTAIN spots on the surface of our globe at once strike the eye of the observer as of commanding importance. Such, in a military point of view, are Elsinour, Gibraltar, and Aden. Such, in a commercial point of view, are Constantinople and Alexandria—cities which are monuments of the sagacity of the great men whose names they bear. And who will doubt that Great Britain owes her supremacy among the nations of the earth as much to her central position with respect to the distribution of land over the earth, as to the untiring energy, the indomitable will, and the wise sagacity of her sons. That England was marked out for wide-spread dominion few will question, who consider her natural features, her rock-bound coasts and spacious harbours, her inexhaustible mines of coal, tin and iron.

Yet of all geographical positions of a secondary importance we believe, that none combine so many natural advantages as Singapore, situated as she is, with a spacious harbour, in the midst of the richest countries of the earth, the greatest portion of the trade of which must touch her port. In half a century hence, when the immense resources of Japan, China, the Indo-Chinese Peninsula, and India, shall have been opened up, and the vast and rich Islands of the Indian Archipelago, each fitted to constitute a flourishing kingdom, have become thoroughly known, she will bid fair to become the greatest naval harbour of southern Asia, and the entrepôt of the glittering wealth with which ancient voyagers and romancers have always, and not unjustly, clothed the climes of the East.

It is strange that the Dutch, with all their natural shrewdness in commercial matters, should have failed to take advantage of the facilities offered by such a place. They little suspected the rich treasure which was within their grasp but half a century ago, in the then small fishing village of Singapore, and we are much mistaken if they yet have any idea of the untold wealth and of the many advantages which lie hid in the unnumbered islands which constitute their boasted empire of Netherlands India. The honour of founding the great commercial capital of the East was reserved for Sir Stamford Raffles, one of those original men who half a century ago were at once the brightest ornaments of the Anglo-Saxon race and the most efficient promoters of its power and stability in the East.

The *Friend of India* in an article in July, 1859, writes thus :—  
'The same wonderful imagination that led Alexander to fix upon Alexandria as a site led a man to whom history has yet to do justice, Sir Stamford Raffles, to fix upon Singapore.' The *Friend of India* here scarcely does justice to the genius of Alexander or to the wisdom of Sir Stamford Raffles. We believe it was his earnest hopefulness of the future joined with a calm and steady judgment, rather than imagination alone, that led Sir Stamford Raffles, after being compelled to abandon Java, to fix upon Singapore as the capital of the commercial empire that England was to found in the East. The pains he took and the reasons he urged to induce England to possess the small Island at the southern extremity of the Malayan Peninsula sufficiently show this.

For a sum of 60,000 dollars and a yearly stipend of 24,000 dollars for life the Sultan of Johore made over the Island of Singapore to the British in the year 1819. Sir Stamford Raffles lived but a few years to lay the foundation of the commerce of the port, and was succeeded by Mr. Crawford, one not unworthy of being his successor. But those who followed them possessed but little of their vigour. The last Governor, Mr. Blundell, in especial, was more fitted to shine in private than in public life. During his long term of contentions, if not of misrule, there was but one opinion with respect to the prosperity of the Islands—that it was checked. It was believed that Colonel Cavenagh his successor, selected by Lord Canning, would prove equal to the post. Lord Canning could scarcely have made a better choice, especially, as it was rumoured, that the French viewed the Straits as, in every way, an eligible acquisition. Colonel Cavenagh had however no special training to fit him to be the Governor of a rising, commercial country. We believe that no Governor of the Straits will succeed entirely who is not possessed of some experience in governing commercial interests. This is the main, if not the only reason, why the European inhabitants of the Straits have been clamouring so loudly for a transfer to the Colonial office; and now that they have succeeded in their object, for the transfer is only a question of time, there can be little doubt that their longings for a different class of Governors will soon be satisfied.

With the above remarks we open this article in which we intend to take a rapid survey, first, of Singapore, then, of Malacca, and lastly, of Pinang, the three stations which comprise the Straits Settlement.

When Sir Stamford Raffles took possession of it in the name

of His Britannic Majesty King George the Third, and planted the British flag in the soil, Singapore was but a hidden creek or inlet running into one of the myriad unknown islands which are included in our Maps under the general title of the Indian Archipelago; its shores were lined with rows of ill-looking craft, and there might be seen a few fishing stakes with rude nets laid on them to dry, naked urchins running about with mangy dogs for their companions, or digging in the sand for crabs, and, a little higher up, some fifty or sixty irregular and wretchedly constructed huts standing high above the ground on posts as if on stilts, and covered with a coarse matting of the Nipah palm. The dense primeval forest, before which our loftiest European woods shrink into insignificance, and whose twilight shades had never been penetrated by a single human being, bordered close upon the piratical settlement. A few conical hills raised their forest-covered tops sufficiently high above the surrounding vegetation to be distinctly visible. At their bases, hid by the forest, lay dismal malarious swamps where day and night only the serpent's hiss or the tiger's growl may have been heard. Altogether, the scene was one wild desolation, feared alike by the enterprising European and the peaceful native trader of the surrounding seas. The solemn stillness of the village was seldom broken save by the dull and ominous sound of the pirates' gong, re-echoed far over the still waters. Such was the Singapore of 1810. The Singapore of the present day is a great city of 90,000 inhabitants stretching upwards of five miles from the Peninsular and Oriental Company's station at New Harbour on the West to the vast cocoanut plantations on the East. Spacious roads covered with hordes of Chinese, Klings, Malays, Jews, and Arabs; churches, town-halls, Institutions and Court-houses, esplanades and ware-houses and solid stone piers running far out into the harbour, which is covered with vessels of every flag and rig, present to the eye the spectacle of a highly civilized and prosperous city. The forests have been cleared away in every direction East and West, and their place occupied by fruit orchards, vegetable gardens, nutmeg, pepper, gambier and sugar plantations; roads twenty miles and more in length have opened up the Island from one extremity to the other; the rivers and canals cutting the town in every direction have had their banks lined with granite stairs to facilitate the shipment of goods, and are crossed by substantial bridges; the genius of Commerce has touched the place with her magic wand and created a trade of 14,000,000%.

There are three principal passages leading into the harbour, one from the China seas on the East; another from the Bay of

Bengal through the straits of Malacca, on the West; and the third from the Southern and Indian Oceans through innumerable dangerous straits past the Dutch settlement of Riou on the South. A lighthouse stands at the extremity of both the East and West passages. Another small entrance is through a narrow strait between St. John's and Singapore Islands through what has been named the New Harbour where the Peninsular and Oriental Company's vessels coal. Entering by either of the three great channels, whose opposite banks can easily be descried by the naked eye, or by the other small passage, the wide and spacious harbour, in which a thousand sail may lie with perfect freedom as to space and safety from the desolating squalls which visit the seas of the Archipelago, at once opens on the eye with a pleasing effect. As the vessel approaches nearer her anchoring ground the town gradually becomes visible, whereas at first only Government Hill\* and a few other eminences were seen. After voyaging past wild and desolate islands covered with a rank and gigantic vegetation, though from a distance they appear perfect gems of loveliness set by nature's own hand in those soft and summer seas, the eye hails with delight the civilized and busy scene presented to it here. But the picturesque beauty of Singapore as seen from the sea can only be fully felt by those who slowly sail into the harbour through the small passage referred to above on a clear, sunshiny day. Reposing on a background of gently swelling hills may be seen, first, densely crowded groups of substantial Chinese houses; next, the warehouses of the Commercial quarter; and then, European residences, public buildings, esplanades, and, far away to the East, thick cocoanut groves; and the quiet harbour with its floating burthens, each an object of beauty, completes the picture. The Island is 26 miles long from East to West and 14 miles broad from North to South. The town, just one degree North of the Line, is built along the shores of the harbour, and from end to end is about five miles long with an average breadth of three quarters of a mile. Rochore River, its Eastern boundary, separates it from the suburb of Gaylang and its extensive cocoanut plantations; Singapore River, runs through its middle; while its West is terminated by what was once the Military Lines (now removed far away to the North East on the Tanglin Road,) and the New Harbour. Numerous straight and wide roads, all the work of the gangs of convicts who have hitherto helped to beautify

\* Government Hill is about 160 feet high. There are no hills higher than 300 feet in or near town. The highest hill Bukit Temah is in the centre of the Island and about 500 feet high.

Singapore, but whom the inhabitants now wish to turn over to the Andamans, stretch across the Island in every direction. These roads pass first through dense cocoanut groves with here and there a glade leading to the very sea-beach, and afterwards, through hill and dale all under cultivation. About eight or ten miles from the town, especially towards the North, where the jungle still holds its sway and where tigers crossing over from the mainland\* roam at will carrying off unfortunate Chinese squatters, these pleasant views cease. Though a great part of the Island still remains uncleared, yet, what has been done already in the way of clearing it and opening it out is more than could have been reasonably expected by any one when Singapore was taken possession of 40 years ago. There are inhabitants now living, who can recall to mind the fishing huts on the strand, where it has now been covered with lofty and substantial godowns, and who then objected to purchase land at ten dollars the acre, which now it is difficult to obtain at *a thousand dollars*. Many poor adventurers who then invested a few hundred dollars in land have now become wealthy proprietors. Nothing can be imagined more lovely than that part of the Island which has been brought under cultivation. Miniature hills whose sides are covered with orchards of a hundred varieties of tropical fruit trees, or with the luxuriant bright-green foliage of the nutmeg, are usually crowned on their summits by substantial, sloping roofed cottages, the country residences of those who can afford the luxury.

The climate of the Island has an average temperature of 75° throughout the year, and frequent, but slight and refreshing showers keep the vegetation always green and fresh. Droughts seldom occur. One lasting three or four weeks is looked on as a great and uncommon calamity, as the wells from which the town and shipping are supplied with drinking water then nearly dry up, and the plantations begin to droop and wither. The soil with but little industry and tillage produces all the tropical fruits. It is essentially sandy but mixed with vegetable mould and the detritus of granite, which rock, at a great depth, forms the basis of the Island. But by no means can it be termed a rich soil. Plantations of the pepper-vine, so plentifully cultivated in Sumatra, Borneo, and the Malayan Peninsula, soon exhaust it. Spice trees, too, though they may be said to grow, and are often seen even to flourish, do not take a firm hold in it. The tenacious

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\* The Straits separating the Island from the mainland are about a mile broad, and were anciently the channel through which vessels for China passed. They are crossed by tigers from the Peninsula.

yellow clay, immediately underlying the sands, is very poor, and destroys rather than affords nourishment to spice trees. Spice plantations, though at their first introduction they paid their enterprising managers, are now found to yield very little profit. A blight, too, falls every now and then on nearly every plantation, causing the destruction of great numbers of the finest trees. But the soil appears to be well adapted for the cocoanut. A plantation of 10,000 cocoanut trees raised from seed after paying all expenses, is worth in six years just 10,000 dollars, or 22,500 Rupees per annum. This will remain a secure revenue for ever provided old trees and those attacked by beetles, which cause a destruction of about two per cent per annum, are replaced when necessary with young plants. In a cocoanut plantation laid out with a due regard to the admission of the light and air, each tree produces annually about 100 nuts. The immense quantities of decayed stalks and leaves are used for fuel with the ashes of which the roots of the trees are manured.

Although, as we have stated, the cleared land on the Island is small in proportion to the uncleared, year by year the extent of cultivation increases. Chinese and Malay squatters in defiance of tigers move forward on their pioneering march, and not very many years hence the whole Island, excepting the red and dusty town and the numerous swamps about it, will, we expect, present an unrivalled scene of miles on miles of Chinese and European villas, and become one blooming and evergreen garden. Flowers of every variety are in full bloom throughout the year, and most of the fruit trees, too, may be seen in continual blossom. The swamps just spoken of, are, fortunately for the inhabitants, daily flooded by the salt-water tides, which render them innoxious. Malaria, therefore, does not much prevail on the Island, except where the forests exclude the light and the air. Narrow, winding streams run into the surrounding seas in all directions, but they are all undrinkable being of a disagreeable taste and peculiar odour.

The town itself, as we have stated before, is about five miles long by three quarters of a mile broad. The breadth is annually increasing, and sometimes a whole street of substantial houses is built up in a few months. Two or three principal streets run the whole length of the town parallel to the strand, and numerous others cross them at right angles. They are all wide and well drained. Many parts of the town present quite a Chinese appearance, and the busy throngs of celestials moving about them make them resemble vast beehives. The Chinese are certainly no idle race. Pushed out of their own country by crowded

competition, wherever money can be made, whether in California, or Australia, or Borneo, or elsewhere in the Archipelago, or the Straits, or the West Indies, there they are sure to be met with in thousands and tens of thousands. From the break of day till its close, the number of Chinese who pass and repass along the principal thoroughfares, all intent on business, appears astonishing to a new-comer. We seldom see idlers in Singapore, as we so frequently do in Indian cities.

The greater portion of the town is occupied by the Chinese, both for shops and dwelling houses. The shops are usually on the lower floor, and the lodgings on the upper. The richer Chinese have beautiful, light and airy villas out of town, generally pleasantly situated on the summits of hills, where they either live or spend a few days on pleasure. Some quarters of the town, near the suburbs, however, are occupied by some immense, plank-sawing establishments. The timber is brought over from the mainland in native boats, and as there are such numerous streams cutting Singapore in every direction, no difficulty is experienced in landing it near the saw-mills. Sago manufactories were once abundant near the town wherever there were swamps, but in consequence of the disagreeable effluvia rising from them, they have, by an order of the Municipality, been almost all removed to a distance of seven miles from the suburbs.

The busiest scene in Singapore, where every scene is busy, is that part of the town called Raffles Place or Commercial Square. It is a rectangle of about 1500 feet by 300 feet enclosing a green plot, and bounded by two-storied, brickbuilt houses occupied by the European commercial firms of the Island. These houses do not strike the eye of the beholder from without as at all large. On entering them, however, he finds they contain lofty and apparently endless godowns, where the merchant's fragrant wares, the spices of the East, lie heaped up to the very roof, and on passing through them he comes suddenly on the stone piers against which the surf continually dashes. On returning into the Square he will see English, American, French, German and East Indian Captains; European, Indian, Negro, and Malay sailors; the Jew stalking along with his handsome face, peculiar dress, and tasseled cap, and with an expression of features that tells of his consciousness of superiority to the races by whom he is surrounded; the Armenian with his grave and patriarchal type of countenance; the Persian, and the Arab, in the peculiar flowing and coloured robes of their respective countries; the Guebre or Parsi with his good-natured countenance, expressive nevertheless of a deep acquaintance with the

ways of the world; the Bengali, timid yet keen; the Kling and Malabarman with their shrewd and cunning looks; the honest faced Malay of Singapore or Malacca; the Javanese of Java; the Boan of Amboyna; the independent and haughty looking Bugisman, native of the Eastern parts of Celebes; European and East Indian merchants and clerks hurrying to and fro; Chinese traders, clerks, and coolies, all with the unvarying, sensual cast of features and low cunning twinkle of the eye which characterise the race; carts rumbling heavily along and creaking under their loads; scores of young ponies just landed from Sumatra, or Java, or Bali, in one corner, and heaps of non-descript goods in another,—all these, put together, form a scene, picturesque and full of bustle, the like of which, on an equal space of ground, might be sought for elsewhere in vain. To the unpractised eye, the different races of the Archipelago are not easily distinguishable, and it requires a long acquaintance with Commercial Square to be able to take in the full meaning and variety of the scene. We believe, not many years hence, Singapore will have half a dozen such squares. Not that trade has not already found other habitats in Singapore. The western bank of the Singapore River particularly, among other localities, may be mentioned as carrying on a great deal of business. With the exception of the Singapore Institution, the Court House, the Town Hall, and above all, the beautiful and spacious Episcopal church, there is not one decent looking building in the whole place.

The only Monument, and it is an insignificant one, is on the Esplanade, built in commemoration of Lord Dalhousie's visit to the Straits. The merchants were so led away by his Lordship's promises, regarding the administrative and commercial reforms he intended to carry out in the Straits, that they voted him a Monument. But Lord Dalhousie forgot the Straits in his care for the vast territories which he added to the Empire. Before we have done with our topographical description of the town, we may just notice the Cemetery and the Convict Lines. The Cemetery is upon the eastern slope of Government Hill and is pretty full. The Convict Lines, immediately beneath the Hill on the East, and always kept beautifully clean, contain upwards of 2,000 of the scum of India. They are very easily managed however, and save the state annually a large sum of money. The chief residents of Singapore have however lately been agitating for their removal, forgetting that the beautiful Church, the Fort, the spacious and well raised roads of the town and Island, and numerous other works testify to their usefulness, skill and ability.

The principal elements in the Singapore population are the Europeans, the Chinese, the Klings, the Malays, and the Portuguese; and we proceed to notice them briefly, leaving out of view the numerous other classes, such as the Bugismen, numbering about 5,000, the Javanese, about 3,000, the Boyans, about 2,000, and the Cochin Chinese and Siamese, about 1,500. The Bugismen, Cochin Chinese, and Siamese are generally petty traders; and the Javanese and Boyans mostly domestic servants.

The Europeans, under which head we include East Indians number about 500. They generally live in pleasant garden houses in the suburbs. A few of them have their residences facing the Esplanade. Their dwellings are for the most part comfortable and roomy, though many of them have plank walls and partitions. Trade is the principal object with most Europeans, and they are either partners in mercantile firms, clerks in commercial offices, hotel-keepers, or the floating population consisting of travellers, ship-captains, and others. We do not include here the Civil and Military Officers or the Soldiers of the garrison. If society is exclusive any where in the East, it is so in Singapore. Money-making has not many humanising tendencies. The richer adventurers exclude the poorer from social intercourse with them, and the poorer, as they increase in wealth, seek the society of those who once kept them at a distance and exclude those who take their place. The evil effects of such a system is great in a place like Singapore, where society is so contracted, literature unheeded, and amusements few. While the wealthy have their pleasant villas, their wives, and the few recreations they are in a position to command; the young assistants and clerks unite with ship-captains and other pleasure hunters to crowd the drinking shops, politely termed 'bowling alleys' and 'billiard rooms,' or frequent the brothels so numerous in all quarters of the town, or have Malay mistresses at home. This laxity of morals has however greatly diminished during the last few years, and will, we may hope, continue to do so. The senior merchants have begun to exercise some influence on their juniors, and ladies, the great want of Singapore, are to be found in many of the houses, forming centres of quiet and well regulated households. But as a seaport town, and as containing Chinese, Klings and Malays, Singapore must always continue somewhat lax in its morality.

The Chinese number nearly 60,000, of whom, however, only a tenth are females. They are scattered all over the town in dense, compact masses, but especially towards the west, where Peking, Canton, Hongkong, Fokien, Nankin, and Shanghai

streets crowd together in admirable confusion. A not inconsiderable number of this class are what are called 'Babas,' the descendants of Chinese who settled at Malacca upwards of two centuries ago. Few of them have seen China though they retain a great veneration for it, and they are generally better able to speak the Malay than the Chinese immigrants. They keep their families at Malacca, and are much attached to that place, where, as we shall see hereafter, the graves of their forefathers form a vast city of the dead. The real Chinese immigrants, with the exception of a few who are wealthy, are mostly of the lower orders of the people; Chinese junks, bringing annually thousands of penniless adventurers, disgorge them at Singapore to swell the ranks of cultivators, coolies, carpenters, boatmen, tailors, shoemakers, and criminals. The professions followed by the Chinese are most numerous and varied. Their Pagoda is a wide and substantial building profusely decorated with the usual fiery dragons and lions, and containing an image of the 'Queen of Heaven.' There are numerous joss-houses throughout the town, but the existence of these does not evidence any religious feeling in the Chinese of Singapore. To describe the Chinese fully, with all their singular manners and customs as they exist in the Straits, would require a separate article, and we must forego doing justice to them here. We shall merely mention, that they are eager to acquire a smattering of miserable English, which is all that the so-called Free Schools at Singapore and the other Straits Stations seem to be capable of bestowing. They are madly fond of opium, arrack, samsoo, and theatrical performances, which to a European are either simply absurd and ridiculous or grossly obscene. They keep their Festival of the New Year with a reckless expenditure of money, a deafening and continuous firing of crackers for days and nights in succession, and grand processions, sometimes a mile in length, in which figure josses, waving streamers, and a monstrous flying dragon with show-girls seated on its back; the Chinese here are grossly immoral, abounding in the abominations of ancient heathendom; their 'gods' are their money and their belly; they entirely ignore the spiritual element in man; all their females, with the exception of grown-up virgins, are allowed to be seen; they are fairly laborious and extremely crafty; many of them are cut-throats, especially those who belong to the secret societies, associations which have given much annoyance to the Straits Government and impeded the course of justice, and which should, proper precautions being taken to prevent a popular outbreak, be at once broken up and extinguished by a decree of Government, carried out by a strong military force.

The Klings, emigrants from Madras, number about 15,000, and are chiefly washermen, syces, carters, podars, shopkeepers, boatmen, and policemen. They are deceitful and cunning, and those in the Police are said to be corrupt. They are, in the proportion of one in twenty, provided with females (not wives), and the rest are grossly immoral, being nearly on a level with the Chinese.

The Malays, about 15,000 in number, are all provided with wives, but are nevertheless immoral, letting out for hire their daughters, and not seldom their own wives to those among the Europeans, Chinese, and Klings who want them. They are an indolent, but polite and affable race. Very few instances of deceit and lying, so abundant among the Chinese and Klings, are met with among them. They look with great respect on Europeans, but despise the Chinese. The character of the Malay is essentially the same throughout the Archipelago, only tinged with peculiar shades according to the locality in which it is developed, in Borneo, for instance, where there is a slight degree of ferocity, not usually visible however, intermixed with the affability and politeness we have spoken of.

Lastly, the Portuguese, or Indo-Portuguese as they are sometimes called, about 2,000 in number, are the same degraded class here that we find them all over in India. A large proportion of them are found in domestic service, some are clerks, others tailors, or compositors. Their defect is untrustworthiness; but in comparison with Chinese and Klings they are moral and virtuous. They have a large Church, rivalling the French one, attended by French Romanists and ambitious Portuguese, not far from which it stands. The Armenian Church, not far from these two, is a small but neat building.

The places of education are the Singapore Institution, where there are about 120 Chinese and Portuguese lads under two or three teachers just able to bestow a smattering of the first elements of knowledge. The pupils are either boarders or day scholars; if the former they pay three dollars each a month, if the latter they have nominally to pay nothing, but usually there is some payment made. After remaining a few years, they leave school able to write a neat hand, and to cast up figures, but with little else, as very few of them can read intelligently. The Institution was founded by the Christian community of Singapore some years ago, and the English Chaplain is the Secretary. A little nominal Christian instruction is bestowed, but not one of its Chinese pupils has ever become a convert. Adjoining the Singapore Institution, is the Benevolent Ladies'

**Institution for Girls.** These ladies are in England, where they subscribed funds, and whence they sent out a School-mistress, who has now from 50 to 60 grown up Chinese girls under her charge whom she is certainly educating to some purpose, for most of them are exceedingly well-behaved, all attend the services of the Church and some have become Christians. About two miles out of town, towards the North, situated on a small hill, are Mr. Keasberry's Schools for Malay Boys and Girls, aided by Government with 1,500 dollars a year, and by the Tumangong, a Malay Prince, with a like sum. Mr. Keasberry was once in connection with the London Missionary Society, but withdrew from it when the Society abandoned the Straits for China. There are about 40 young lads, and 20, chiefly grown-up, girls. They are given over by their parents or guardians for a certain number of years into Mr. Keasberry's charge, during which time he has to feed and clothe them. He teaches them the plain truths of Christianity and insists on their attendance at his Malay services. This system has resulted in some conversions. His converts are certainly some of the most sincere and intelligent we have anywhere seen. His boys as they grow up are taught handicrafts, as book binding, printing, lithographing, and we would wish to see this system more widely carried out in India by Missionaries than it usually is. The girls are kept till the time their parents remove them, or if, as is often the case, they are orphans, they are retained till they are properly disposed of in marriage. Each sex has separate quarters, studies, and teachers.

Besides these there are some day schools for the young, a Romanist School for the Portuguese, a nunnery, and two miserable classes kept by two Hindus of Madras in the Chinese quarter of the town for teaching reading and writing.

Mr. Keasberry seeks to influence Native thought by publishing some curious Malay periodicals, of which we may say, that they do little good save serving as a protest to the money-seeking tendencies of Singaporeans. Still, we must admit, that some of the wealthier merchants are often very liberal in their donations towards Mr. Keasberry's Mission, which labours chiefly among the Malays. There are also, besides the Romanist Mission, chiefly directed to the Chinese, and which numbers some thousands of converts, a native Catechist to the Chinese connected with the Scotch Minister, and a native Catechist to the Klings connected with the English Chaplain. The Society for the Propagation of the Gospel, too, has just appointed a Missionary to Singapore.

Before we have done with Singapore we must refer to its trade which has made it what it is. As might have been expected from the situation of the port, its trade has gone on steadily increasing. It was thought some ten years ago, that the prosperity of the Island had reached its utmost limit. The value of the trade was then just £ 3,000,000. In 1859 it had increased to £ 12,000,000, or had *quadrupled*. During the last official year, although the Report would show a slight diminution from the last mentioned amount, still we think there is no reason to believe, that the trade will now become stationary, or begin to retrograde. At present, though already the fourth city, in all Asia in commercial rank said above, only the foundations of its future commerce have been laid. We may yet see it equalling in trade that of Shanghai, Calcutta, and Bombay, and, it may be, outstripping some of them. The number of square-rigged vessels which arrive annually at the port may be set down as 2,500, with a burthen of 1,000,000 tons. Of these, fully 1,500 vessels carry British colours; the remaining 1,000 being composed of Dutch, about 500 vessels, but with a burthen of about 100,000 tons, next, of American, with a burthen of about 200,000 tons, and lastly, of Arabian, Belgian, Bremen, Danish, French, Hambro', Native, Portuguese, Peruvian, Prussian, Swedish, Sardinian, Siamese, and Spanish, with a total of 100,000 tons.

But there is, besides, a large traffic carried on by natives through Chinese, Malay, and Bugis junks and prahus, which cannot amount to much less than £ 2,000,000, and on the expansion of this trade much of the commercial prosperity of Singapore depends. Of the nature and value of it we may obtain an idea by considering the following statements.

The China junks, about 300 of which annually visit Singapore, are of an average burthen of 100 tons each. Manned by native Chinese, they come with the monsoon, usually consuming three months in their voyage, and arriving at Singapore towards the early part of the year, where they anchor for another three months. Their cargoes consisting of tea, camphor, nankeens, raw-silk, tiles, jars, and all sorts of indescribable supplies for the poorer Chinese scattered all over the Archipelago, are readily disposed of to a good profit to the Chinese traders of the place. Their return cargoes consist of cotton and cotton-goods, opium, pepper, tin, rattans, birds' nests, &c. They take back, too, a quantity of dollars remitted home by the Chinese of Singapore.

The Bugis prahus, about 200 of which, with an average burthen of 50 tons each, annually arrive at Singapore towards the close of the year, bring large quantities of Celebes coffee,

of a quality reckoned superior to the vaunted Mocha, and expressly reserved for the English market, tortoise and mother of pearl shells, live birds of the most gorgeous plumage, gold dust, biche de-mer, kayuputi oil, corals and rare varieties of sea shells, native cloths of a most tough and durable texture, and a number of other articles. They come principally from the islands of Celebes and Gilolo, taking on their way different ports, and trading, chiefly in slaves, between them. They procure their cargoes from the neighbourhood of Papua and the numerous islands surrounding it, sometimes even visiting the north coasts of Australia, and are engaged in gathering here a little and there a little for months previous to setting out for Singapore. Sailing in small fleets, pirates generally keep shy of these bold and fearless men, and even the noted Lanon pirate fleets, who hesitate at nothing else, pause before they attack the Bugis. For, ever upon the seas which surround Celebes and Papua, they are excellent sailors, but at the same time they are very simple and are no match for the wily Chinese. When they arrive in port, all the native traders of Singapore are astir in order to secure, each for himself, as early and as cheaply as possible the treasures of the Eastern Seas. After the Bugismen, have wandered about the bazaars for a few days enquiring into prices, they strike their bargains and unload their vessels, and, as is very often the case, they part with their goods for a fourth of their proper value. Then may be seen Malay shell sampans covered with the most rare and lovely shells and corals plying about from ship to ship in the harbour; tons of tortoise shell and mother of pearl glittering in heaps before Chinese stores; and all Singapore filled with crimson and scarlet feathered loories, birds of paradise, and snow white cockatoos. The return cargoes of the Bugis traders consist chiefly of iron, steel, cotton goods, gunpowder, opium, gold-thread, &c., and on these they make enormous profits in their own islands far away in the Pacific.

The Malay prahus from the islands of Bali, Lombok, Borneo and others, come in flotillas of all sizes, and often run narrow chances with pirates. They bring large numbers of strong native ponies, some rice and coffee, pepper, camphor, rattans, gold-dust, and sago, and take back muskets, gunpowder, opium, dollars, and cotton goods.

Besides the above, there are some native junks, well built and quick sailers which carry on trade between Cochin China and Singapore. They usually bring rice and sugar, for which productions Cochin China is famous, also cocoanut oil and sago. The greatest part of the Siamese and Cochin Chinese trade has

been diverted into square rigged vessels, generally steamers, owned by the Sovereigns of the two countries. We must not, however, forget to add, that the present attack upon Cochin China by the French, has greatly deranged her Sovereign's commercial calculations.

Malay and Chinese schooners of 30 and 40 tons burthen also constantly ply between Malacca and Singapore, bringing from the former place tin, rattans, poultry, fruits, and different productions of Sumatra as pepper, camphor, and gold dust, which are carried to Malacca to be thence transmitted to Singapore.

Singapore, as is well known, is a freeport, and vessels of all nations and flags may enter it and depart without paying anything beyond the Light dues.

Malacca alone of the three Straits Stations has a name in history; it being not improbable as we think, that it is the Eastern extremity of what was known as Ophir to the ancient Hebrews, or Sophir to the authors of the Septuagint version, whither the fleets of Hiram and Solomon voyaged on their trading expeditions. In various parts of the First Book of Kings the following notices are given of the productions of Ophir. 'And they came to Ophir, and fetched from thence gold, four hundred and twenty talents.' 'And the navy also of Hiram, that brought gold from Ophir, brought in from Ophir great plenty of almug trees, and precious stones.' 'Once in three years came the navy of Tarshish, bringing gold and silver, ivory, and apes, and peacocks.' It is well known that there has been a dispute among the learned as to the situation of Ophir. Some contending that the Eastern part of Africa now called Zanguebar and Mozambique, where there is a region called *Fura* producing gold, was the Ophir or the Tarshish of the East, Spain being that of the West. Others believe that the district of Oman in Eastern Arabia, where is a place called *Al-Ophir*, is meant; and others say that India and Ceylon are to be understood. We do not intend to fix on any particular spot and call it Ophir; but we wish to see where the statements of Scripture lead us. The Eastern Africa theory is entirely inconclusive; for although it is said, that the Queen of Sheba (the present country of the Hebshis or Abyssinians and the southern parts of Arabia) came to see Solomon with great stores of gold, precious stones, and spices, it is nowhere said that these, at least the gold and precious stones were the productions of Sheba. As Sheba lay contiguous to the gold regions of Africa and not far from India, it does not seem at all improbable, that she obtained these precious articles by trade with those countries. Though 'apes,' or monkeys and 'ivory,' may be found in abundance in Eastern

Africa, we are not aware that either 'silver' or 'peacocks,' 'almug' trees or gems can be procured there. This theory, then, is inconclusive, together with that which fixes on Oman, for the same reasoning applies to both, and both must be abandoned. We have now only Ceylon and India, to fall back upon. But we would first state that the Hebrew for 'peacocks' might better be rendered *parrots*; that 'silver' should be translated or understood to be a metal of a *pale white colour*; and that by 'almug' or 'algum' trees Hebraists generally understand the *sandal wood tree*, but without much reason; for sandal wood, whether of the red or the yellow variety never grows in such abundance, or to such a size as would allow of 'pillars for the house of the Lord,' or 'terraces,' or 'highways,' being made from it. Sandal wood is generally used for ornamental boxes and other small articles, and even Indian Princes with all their command of the material, leave as monuments of their magnificence nothing larger than doors of sandal wood; but as for making 'pillars,' or 'terraces,' or 'highways,' it is never dreamt of; first, because the tree would not furnish timber for a 'pillar,' and secondly, its forests would not furnish sufficient quantities of material for either 'terraces' or 'highways.' The uses to which the 'almug' was put gives us the idea of lofty, gigantic trees, which though valuable could be had in abundance. The only reason which has led Hebraists and others to fix upon the sandal-wood tree, is because they know of no other valuable tree in the East; some have indeed thought of the *cedar*, but this requires no refutation. Now India and Ceylon could have furnished the gems, as well as the 'monkeys,' 'parrots,' and perhaps the 'gold'; for the regions of the Indus (the ancient *Havilah*) still produce a little of the metal, but what were the valuable almug trees, which were to be had in such abundance? Before we reply to this question we shall draw attention to the facts that Borneo is eminently a gem-producing country, the largest diamond ever discovered being said to be in the possession of the Sultan of Mat-tar, a principality in South Western Borneo; that richer pearl banks than have ever existed, or do now exist in the Sea of Oman or the waters of Ceylon, are to be found to the East of Borneo in the channels of the great Sooloo Archipelago; that monkeys of innumerable varieties from the *orang-otang*, that caricature of man, to the meanest and smallest species, people every wood of the Indian Archipelago, so much so that it is often called 'the land of apes and monkeys'; that parrots, loories, cockatoos, birds of paradise, and a hundred other gorgeously dressed varieties are to be found in abundance all over the Archipelago, and that

the wide extent of the Archipelago is one vast, inexhaustible gold producing and distributing country. Having brought these facts before the reader we may now state the reasons which lead us to consider the Indian Archipelago, and in it the port of Malacca, as the termination of the voyages of the trading fleets of Hiram and Solomon. Silver (or, as, it may be understood to mean, *tin*) is nowhere produced in India; but the whole Malayan Peninsula, with its adjacent islands, is one rich *tin* field. Silver is a very precious metal, and yet it is said to have been as plentiful as 'stones' in Jerusalem. We find an easy explanation of this expression in the fact that the Hebrew word which has been translated *silver* may be rendered *tin*, the largest known deposits of which metal are found in the Indian Archipelago. Another production peculiar to the Archipelago is the *Camphor tree*, one of the most gigantic and lofty of the great trees of the forests, which so densely clothe these islands. The trunk often rises 120 feet before it branches out, with a girth a few feet above the ground of 25 feet. A single trunk would form a most magnificent pillar or column. The timber is so plentiful, that 'terraces' or 'highways' being made of it appears nothing improbable; it is also valuable, being fragrant and lasting. An extensive trade has always been carried on in it. The word 'almug' etymologically leads to the idea of the wood having the appearance of Coral, and 'algum' may show that the wood was either resinous, or produced some resin. It is remarkable that the timber of the camphor tree is resinous in quality, produces the most valuable resin\* known, and has a fresh, pale-red tinge much resembling that of the common coral. Here, then, in the camphor tree, we may find the qualities and appearance of the 'almug' or 'algum tree.' The timber called Sapan wood also fulfils many of the conditions of the scripture description of the algum tree. To sum up what we have said:—'gold,' 'silver' (*tin*), 'ivory,' 'precious stones,' 'parrots,' 'monkeys,' and 'almug' trees, are mentioned as the articles brought back by the fleets of Hiram and Solomon; Eastern Africa produces 'gold,' 'ivory,' 'monkeys,' and even some 'parrots'; but no 'precious stones,' 'silver' (*tin*), or 'almug' trees;—Oman produces 'gold' and 'precious stones'; but not the other articles;—India and Ceylon produce 'gold' (in such limited quantities, however, that it would all be required for home use,) 'ivory,' 'precious stones,' 'parrots' (of common varieties and not much worthy of mention,) and 'monkeys;' but

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\* Camphor is not, strictly speaking, a resin; it is rather a solid volatile oil. (Note Ed Cal. Rev.)

'silver' (*tin*), or 'almug' trees are not among her productions;—but, in the Indian Archipelago we find all these articles in the greatest abundance; it is one, great 'gold' and 'silver' (*tin*) field, mounds of 'ivory' are still found in its forests, in 'precious stones' it is particularly rich, 'parrots' and 'monkeys' of a hundred rare varieties enliven its forests, in which one of the loftiest and most common of trees is the *Camphor*, and in which the *Sapan wood* tree is abundant, in either of which we find the equivalent for 'almug.' We thus come to the conclusion that Ophir or Sophir was as indefinite and yet as well defined a term as 'the East' is with us, and that the articles specified were procured from different ports all along Southern Asia, the last port on the line being Malacca, which has thus in all probability been the mart of the Archipelago from time immemorial.\*

By whom Malacca was first founded, it is impossible to determine, her history being buried in the remote past and the few Malay authors who make mention of her being utterly untrustworthy. It would seem however, that three centuries ago, Malacca was a colony of Chinese and subject to the Chinese emperor who, it is said by Wertemanus of Rome (1503), built it on account of the 'commodity of the haven.' This account of its origin will not seem improbable if we remember that China has traded extensively with the whole Archipelago from the remotest times,† and planted many colonies in different parts, of it, and to such extent in Northern Borneo, that Malay traditions tell us of Chinese Princes who were formerly Sultans of Brunai;‡ and when we consider the probability of the Chinese seeking an outlet for their trade to the West, as the caravan route from China to Persia passed for thousands of miles through deserts and mountains, under circumstances of serious danger. But whether Malacca was founded, or conquered, or wakened to new life by the Chinese, it is impossible now to determine. The harbour of Malacca is repeatedly praised in old writers, and it is itself mentioned as 'a city of marvellous great trade of all kinds of merchandise, which come from divers parts,' as 'the richest city of the Indies, next to Goa and Ormuz,' and as having merchant citizens so wealthy 'that they used to compute by no less than bars of gold,'

\* Josephus we find expressly says that the *Aurea Chersonesus* was the Ophir of Solomon's time. This confirmation of our own conclusion is valuable.

† For the antiquity of the Chinese Trade in the Archipelago see an Article on the subject in the *Journal of the Indian Archipelago*.

‡ Among these traditions is found the beautiful legend relating to Kini Ballu (The Chinese widow) the name of the highest mountain in Borneo, for a rather inaccurate version of which see Hugh Low's *Sarawak*.

which last expression is still literally true and reminds us of the words used in Scripture regarding the quantities of gold which Ophir produced.

The Portuguese under Albuquerque took the place in 1509, having it is said defeated an army of 30,000 natives who were defending it; but the Portuguese rule extended over a very small circle round their Fort, and there were continual attempts made by the natives to retake the place. At last the Dutch, coveting it, allied themselves with the Malay Sultan of Johore, and attacked and took it in 1642, retaining it in their own possession. To be secure from their allies the Malays, they built a formidable fort, enclosing in it St. Paul's Hill, which rendered all native attacks on the place hopeless. Under the Dutch, Malacca began to regain its prosperity, till its revenue considerably exceeded its expenditure. In 1807 it passed into the hands of the English with the other Dutch possessions of Netherlands India, but was restored together with Java when the Peace in Europe closed hostilities with Holland. Finally, in 1824, Malacca was exchanged by the Dutch for Bencoolen in Sumatra which had been retained by the British. Here Malacca's history ended, and since then there has been only the episode of the Nanning war in which, for a due of some 25 rupees from some cultivators which they objected to pay, about 25 lakhs were spent in a bush-ranging warfare with the Malay rebels, and after all it was hushed up much to the credit of those who did so. Malacca's commercial prosperity declined from the time of its passing into the hands of the British.

The harbour is formed by a slight bend in the sea-shore, and separated from the wide straits by the interposition of three small islands. The water shoals at a considerable distance from the shore, so that the station is pretty safe from the operations of men of war. The view of the station as one enters the harbour from the South on a clear evening is the loveliest that can be imagined. First St. Paul's Hill is seen crowned with the gray ruins of what was a Convent in the Portuguese times, but is now used for the powder magazine, its solid walls being nearly shell-proof. As we approach nearer, the station expands, and we can see the gardens on the south, the swarded strand running along the base of the hill, the little stream which separates the native part of the town from the European and the closely crowded Chinese quarter, looking as if it was one mass of masonry. On entering into the stream to get to the landing place, an old ghaut, the pleasing effect is not disturbed. An ancient bridge spanning the rivulet stands upon the left, the old Dutch Church and Stadt

Haus are in front, St. Paul's Hill rises immediately above them, and to the left may be seen the beautiful strand and the tranquil harbour. There is no noise, no bustle, or activity, which strike one so rudely at Singapore; no vehicles are in waiting, there are but few passengers in the streets, and these all look so lazy, and contented, that a feeling of repose comes over the traveller wearied with the eternal din of the sister station in the South. As one walks up, he finds all whom he meets, Chinese, Malays, or Europeans, wearing the same lazy, comfortable look. Malacca is eminently a city of the past, not one of the present with its incessant bustle and commerce. The beauties of other places strike us by their novelty, which soon wears out, but that of Malacca, like Naples, though in a lesser degree, continues to expand in loveliness and new points of interest day by day. Were we to choose any place in all the East to doze away our existence in a calm enjoyment of the picturesque and beautiful in nature, and in a quiet round of pleasant and hearty social intercourse, our choice would rest on Malacca.

The old province attached to Malacca extended further than the limits of the present, and included mount Ophir; but by some ill-considered treaty the district surrounding the latter, rich in deposits of gold and tin, has been given up to the Natives. The present province of Malacca is about 31 miles square and contains from six to seven hundred thousand acres. There is very little cultivation carried on, and that only in paddy by the Malays. A road leads from the Station direct to Mount Ophir which is well worthy of a visit whether by men of science, or mere sportsmen, or lovers of beautiful scenery. The country near the suburbs of the town presents only sights of extensive paddy fields; but further off virgin forests cover the soil, with here and there a small Malay clearing. The Chinese consider Malacca a place for repose; the Malays are essentially lazy, and we have no European planters here as at the other two Stations, the reason of which is, that while the lands of the other two were unoccupied and the right to hold them could be obtained without difficulty, those in Malacca were burdened by various incomprehensible tenures. This has checked the prosperity of the Settlement, and made Government merely the nominal lords of the soil. It was to do away with these tenures that the Malacca Land Bill was introduced into the Legislative Council. We may explain them briefly by stating, that when the Dutch were masters of the port of Malacca, and but nominal owners of the outlying province, they recklessly parcelled it out among their servants in large tracts of from five to fifty thousand acres, on condition of their

paying a tenth of the produce raised. Thus the whole province belonged to a few lazy Dutchmen. This claim rests upon a document discovered in 1827, which referring to one of 1773, interdicts proprietors from levying more than one tenth of the produce from their tenants. We see here one of those trifling causes from which serious difficulties take their rise; for when in 1807 the province passed into the hands of the British, not a word was said about this wholesale giving away of lands; the Dutch were burning for shame that their empire of Netherlands India, their sacred preserve, should be taken away from them by the British; they even yet cannot look with a kindly eye upon the Straits Settlement; considering all these things it does not look improbable, that in order at once to do the British an injury and to reward their own servants and fellow-countrymen, the document discovered in 1827 was written out, just before the Dutch were leaving Malacca for ever, and made to refer to an apocryphal one of 1773. We trust we are doing the Dutch Government no wrong. It is remarkable, that not one of the so called proprietors possessed a title deed. This was perhaps forgotten in the hurry. This circumstance of course was explained away, when a strict investigation into their claims was made in 1827. What is asserted by the so called proprietors is, that the lands and the right of levying the tax on them, had been given away in perpetuity. Thus they were the real lords of the soil. The British Government, with that tenderness which has always characterised it in dealing with just or unjust claims on lands in India, determined not to ignore these doubtful claims, (which should have been done, and which was wisely done by Lord Canning in the parallel case of Oude with eminent success) but redeemed them at a total payment of Rupees 17,354 per annum to the claimants, who thereby received what they had never expected, for the tenth of the produce of their lands was a mere nominal revenue and they seldom could get it. At present, it is remarkable that though cultivation has increased on these lands, Government is a loser through paying the redemption money. The Dutch proprietors knowing the fact of the increase of the cultivation, and that British authority is real over the whole province, so that they could now go about their estates and collect the fair tenth, which would exceed the payment they receive, have clamoured to get back the management of their lands, and have thus once more drawn the attention of the Government to the anomalous tenures under which Malacca lands labour. We trust the Malacca Land Bill will decide the question for ever, and that Malacca will now start on a new career of prosperity.

The soil is virgin, and rich beyond calculation. It is adapted to every species of tropical cultivation. Sugar Cane grows in rank luxuriance and to an enormous size. Coffee and Cocoa thrive as they are found elsewhere to do only in Celebes and Brazil, the cocoa tree being often loaded with its rough, scarlet pods and growing to a height of 20 feet. Cocoanut trees live here to a great age, and some near the station are so old and lofty, that they are used as landmarks by mariners. Spices, with the exception of Cinnamon, do not succeed, though the largest and bushiest Nutmeg tree any where in the Straits is to be found in the little Government garden at the back of the Stadt Haus on the slope of St. Paul's Hill, and it is the only one now left of all the thousands which were once planted out. But Indigo thrives as it does only in Borneo and the lands adjacent. Indigo planters of Bengal would quite forget their troubles if they left Bengal and settled down somewhere in the Straits. With a healthy and salubrious climate; with labour available in abundance; with no powerful Zemindars to trouble them; with their lands their own; they would make their fortune in half the number of years that is required in India, for the soil may be made to produce *four* crops in succession in one year, instead of the two obtainable in Bengal of which one is always endangered by inundations. It will be a new era in the prosperity of the Straits when Indigo Planters make it the field of their labours. In India we only think of the Straits as a place of bustling trade, but there are hundreds of thousands of acres of the richest soil available in fee simple, and on which every description of tropical produce can be grown with large and speedy profits. It is partly this which makes us see the few Straits settlers, who have returned to England, powerful in making their wishes known and granted in and out of the House, while the numerous planters and merchants of India have little or no voice in Parliament at home. Mr. Horsman, one of the leading agitators in Parliament, and one possessed of considerable influence in the House, is a retired planter of Pinang. We do not, however, think *Cotton* will succeed any where in the Straits except it be in Pinang. The provinces North of Province Wellesley, *viz* Kedah and Tenasserim up to Chittagong are we believe the home of this valuable vegetable wool in the East.

Within the limits of the British province of Malacca there are several productive mines of tin and gold, which are worked by thousands of Chinese and Malay miners. But the principal mines of both gold and tin exist in and about Mount Ophir which, as we have stated above, has been unfortunately alienated

from the province. The depth of the gold mines is from 70 to 200 feet, and the process of pounding the rock and washing the gold dust is simple and rude. The tin is worked from lowlands at the depth of a few feet, and some of the ores are so rich, that they contain about 80 per cent of the metal. It must be remembered, that the whole Malayan Peninsula, from Perak and Queda (Kedah) on the North to the islands of Carimon and Banca, which were once probably connected with the main land, in the South, is one rich deposit of tin.

The town is divided into two distinct quarters, the Northern or Chinese, and the Southern or Christian, separated from each other by a small stream spanned by an old bridge. The Chinese quarter is, as usual, densely crowded and populous, but there is not so much bustle in it as in the native parts of Singapore. The Chinese here are all of that class who are called 'Babas.' Their forefathers settled here some centuries ago, took Malay wives, and the progeny that resulted intermarried only among themselves. They are generally men of some substance, and some of them are the richest Chinese merchants as well as landholders of Singapore. Most of them after acquiring a competency there, while yet young, retire to Malacca to enjoy the sweets of repose and doze away the remainder of their days. Chinese morality stands a degree higher at Malacca than at Singapore; and this may be owing to the presence of the large Portuguese Christian population, between whom and the Chinese there are many matrimonial links.

The Christian quarter on the South is built facing the harbour, with neat, substantial dwellings surrounded by gardens. Here the one or two officials and the few Dutch families reside. These last are generally persons who have inherited a competency, and pass their lives in cheerful and contented inactivity, visiting each other often, and keeping an open and hospitable house for travellers and visitors. The young ladies at Singapore do not meet the demands of the place; but at Malacca the demand is less than the supply, and the matrimonial market is overstocked. Behind the Dutch quarter, in humbler residences and with poorer means, live the Portuguese, who muster here in considerable numbers and have a decent Cathedral of their own, on which they look with no little pride. Malacca is the head quarters of the Portuguese priesthood in the Straits. Perhaps we should explain here, that when we speak of Dutch and Portuguese, we refer to the descendants of those who settled at Malacca under the Portuguese and Dutch rules.

The population of the whole province is about 80,000 : that of

the town being a third of the above number. Of the town population not many are Malays they are chiefly to be found in the country ; but there are about 12,000 Chinese, 5,000 Klings 3,000 Christians (Dutch and Portuguese,) 1,000 Bengalis (chiefly convicts and their descendants,) and about 1,000 of the various races of the Archipelago and Arabs.

The Dutch and European residents enjoy the ministration of of an uncovenanted assistant chaplain who is also the Secretary of the Free School of the Station, where about 300 pupils, chiefly Chinese lads receive instruction in the same miserable amount of reading, writing, and ciphering as is bestowed in the Government Schools of Pinang and Singapore. The Portuguese have a well attended school of their own, in which *reading* at least is taught more intelligently than in any of the three Government Schools in the Straits. There is a Romanist Mission to the wild tribes in the interior of the Peninsula, which is stated to have been a success. But there are no efforts made by Missionaries in the town. When Dr. Morrison of the London Missionary Society first came out to the East, he chose Malacca for his station, built and succeeded in endowing an Anglo-Chinese College, and got out a heavy wooden press. But after a time the Missionaries were removed to China, the College was sold and broken up, and the wooden press is all the memorial left of the Mission.

We have incidentally noticed St. Paul's Hill in a previous page. It received its name from the Portuguese, and is about 150 feet high, covered with a close, green grass called at Malacca St. Paul's grass. It is crowned with a gray, massive building in ruins, which was once a convent. Just below it, in front, are the residences of the Dutch and the few officials. On its South is the small Hospital, and the ruins of a massive gate, the only remnant of the strong fort with which the Dutch surrounded the hill, and which was blown up to the very foundations by the British. On a slope to the East is the Cemetery, which contains but few graves, and further off the Convict Lines and Military Barracks. On the North-East slope is a beautiful little Government garden in which stands the solitary, but great nutmeg tree of Malacca. On the North is the Free School, the old Dutch Church, a small, ugly building now used for the services of the English Communion, and the thoroughly Dutch Stadt Haus looking neat, and substantial. This last accommodates all the Government offices, and still has much space to spare. The old state furniture of the Dutch still remains, and may be examined by the curious. The Strand

in front of the residences of the Dutch is lovely and picturesque beyond description, especially on a clear moonlight night. Near the suburbs, towards the South-East, on a chain of hills from 200 to 300 feet high which separates the paddy fields from the town, lies the Chinese Cemetery, a vast city of the dead. One may walk for a mile and more on these treeless hills, whitened with sepulchres, all silent and still as death. There are large Chinese Cemeteries both in Pinang and Singapore, but they are not so extensive, as this of Malacca. The graves are always kept clean and in good repair, and, once a year, offerings to the dead are made at them.

We must now close this account of Malacca with a few lines about the trade of the place. Some tin, a little gold dust, a little gutta percha, rattans, fruits, and poultry, are exported to Singapore; and opium, specie and piecegoods are brought back in return. From the surrounding petty states and from Sumatra quantities of pepper, camphor, tin, and gold-dust, are imported to be sent on to Singapore; and the return is made generally in rice grown in the province and piecegoods and opium brought from Singapore. The harbour is quite free from native craft, the few belonging to the town keeping inside the river, and the few schooners or brigs usually lie far off in the distance. The trade of Malacca has been ruined by Singapore and Pinang, and amounts now to a little over a million sterling.

About four hundred miles to the North of Malacca, at the head of the Straits, and separated from the mainland by a channel 2 miles broad, which forms the harbour, is the Island of Pinang. As seen from a distance out in the Straits, here nearly 200 miles wide, it appears very rugged and mountainous. The highest peak, not far West of the town, is about 2,700 feet high, Government Hill adjoining it is about 2,500 feet, and the other hills from 1,000 to 2,000 feet high. They run in chains in every part of the Island save the East. It is at the northern extremity of this eastern plain that George Town or Pinang as it is called by Europeans, or *Tanjong (Cape)* by the Malays, is situated.

The Island is fourteen miles long by eight broad; it was obtained from the neighbouring Malay Sultan of Queda through the influence of a Captain Light, who is said to have married his daughter, and who was appointed the first Governor in 1786, for a yearly payment of 6,000 dollars. The Island then was wild and uncultivated, with only some 20 or 30 inhabitants. It was not till long after, that, for the protection of the harbour, the opposite coast some 30 miles long by 15 broad, was taken from the same Prince for another annual payment of 4,000 dollars.

The harbour may be entered from both the North and South, the channel towards the South being marked off with floating buoys and lights. The entrance by this Southern Channel shows picturesque views only on the Island side, where wild and precipitous hills rise from the edge of the sea; but it is tiresome when in a sailing vessel with a contrary wind, as the whole length of the Island must be passed before the harbour is reached, and for a considerable distance the masts of the vessels in port are dimly seen, tantalizing the expectant traveller. Of course in a steam vessel the distance is quickly passed. But the entrance by the Northern Channel, which being wider allows a free berth for tacks in contrary winds, is most pretty. It is bounded by views of lofty chains of mountains on the Peninsula on the left, and the Great Hill on the right. Further on the plain becomes visible, and the shore is seen dotted with substantial, white houses surrounded with gardens; and scarcely are these past when the point on which the small, low fort is situated is turned, and the vessel is in the crowded harbour and at anchor. Thirty or forty square rigged vessels are seen lying at sufficient distances from each other, and further to the South some hundreds of junks and prahus line the shore. Neither the harbour nor the town wears the noisy and crowded aspect of Singapore. Along the shore, running far off to the South, warehouses and Chinese buildings crowd each other. A stone jetty runs out into the harbour, and this is the usual landing place. On landing, towards the right is the fort and the esplanade, and towards the left ugly, puny buildings painted a hideous yellow. Pinang has no public strand, and so the usual place of concourse in the evening is the esplanade or the Eastern face of the fort.

If the traveller drive on due West, he soon leaves the town, and passes between rows of country houses surrounded by the gardens that were visible from the Northern entrance to the harbour, and after some four miles, when the country houses cease and give place to cultivation, he arrives at the base of the 'Highlands.' Here, after passing through a wild nutmeg plantation, he comes upon the water fall, one of the lions of the Island. It is a very small one and little worth the trouble of seeing. It is from here that the town is supplied with pure water through pipes. Or if he intends to go up the Government Hill, he leaves his carriage near the entrance of the nutmeg plantation, passes through a defile, mounts a strong pony and begins to ascend. After some two or three hours invigorating exercise along a road whence very pretty views are sometimes obtainable, and whose sides are often densely wooded and peopled by tribes

of chattering monkies, we gain the summit. Here, at a height of 2,500 feet above the level of the sea, there is a Government House, a signal station, to give notice of vessels making for the harbour, a beautiful Government garden, and numerous pretty bungalows scattered at intervals. On a clear day the sea is visible to a distance of 50 miles to the West, the little town is seen lying just at the foot of the Hill, the channel separating the Island from the mainland shrinks into a small stream, and on the opposite coast the bold mountains of Quenda tower up in gigantic masses, forming a back ground to Province Wellesley with its plantations; while towards the South there is an endless succession of wooded or cultivated hill and dale. The climate up here is cold enough to require the use of a pair of blankets at night, and is most pleasant throughout the day.

But if from the jetty the traveller strikes due South, he passes along what was once the beach, and is now a street lined for two miles with compact masses of houses and crowded with all the traffic of Pinang.

The inhabitants may be divided as at Singapore into Chinese, Klings, Europeans, Portuguese, and Malays. There are, besides, a few Burmese living on the road to the waterfall. The Klings and Chinese are pretty well provided with wives, but the Chinese, whether married or unmarried, whether in or out of China, are always steeped in gross vice. There are numerous Joss houses and Chinese guild-halls all over the town. The English Church is an ugly, yellow building, situated but a short distance from the jetty. The Romanist and Scotch Churches adjoin. There is another Roman Catholic Church for the Portuguese and for Chinese converts. Not far from this last stands the third of the lions of Pinang, the other two being the waterfall and Government Hill. We refer to the Pinang Roman Catholic College, a range of buildings crowded with Burmese, Siamese, and Chinese youths who are being here prepared to carry the creed of Rome throughout the length and breadth of South Eastern Asia; it can boast of a decent Museum. This last is well worth a visit. The arrangements made in this College for physical self-denial as well as recreation are admirable.

There is also a Mission to the Chinese carried on by the Revd. Mr. Chapman, a gentleman unconnected with any Society, but depending upon the support of the Christian public of the Island. Much good has been done by it; for besides some converts it has two schools for boys and girls, generally orphans, there are weekly lectures in the town, besides Sunday services, and medicine is freely given away to the poor. Besides the

nunnery, and a Roman Catholic School, there is the Government Free School, with about 300 pupils, Chinese, Klings, Burmese, and Christian. The same smattering of English is bestowed here as at Malacca and Singapore. Vast sums of money have been spent by the Government on these Institutions only to teach Chinese how to spell through English ! Government should either at once withdraw its aid, amounting to upwards of 7,000 Rs. a year, or enforce a higher and better standard of education. The money as spent at present is simply wasted. That Chinese youths are capable of learning we have not the least doubt. In China they pass the most strict and severe examinations in a language confessedly difficult even to themselves. The excuse generally made is that the medium of instruction being the Malay, there is necessarily much difficulty in teaching young lads English. We confess we do not see the force of this ; it is never made in India, where Bengali and Tamil are confessedly more difficult languages than the Malay, which is simple, rich in varied imagery, and as expressive as the English. With two English Masters to each School, with competent assistant teachers doing away with the present worse than useless monitorial system by which ignorance propagates ignorance, the Schools would in a few years be what they should have been long ago—the means of diffusing the light and truth of Western civilization among the Chinese and Malays. A more efficient staff is needed, the salaries of the different teachers should be better graduated, and an able Inspector of schools should be appointed to maintain a strict supervision.

Province Wellesley on the opposite shore contrasts strongly with the forests and jungles of Malacca, being covered by cocoanut and sugarcane, or by paddy plantations. An attempt is just being made by a planter from the Southern States of America to raise cotton here, but with what prospect of success is not yet known. European planters reside on each estate and direct the cultivation. The labourers are Chinese, Klings, and Javanese ; the first are always the best. The soil, like that of Malacca, is rich and mixed largely with granitic and other allied plutonic rocks. Alluvial beds, too, of extreme fertility lie at the foot of the granitic masses. Roads, rivers, and canals run throughout the Province in every direction. At the distance of every few miles a Chinese village or Malay hamlet is met with. There are a Magistrate's Court, a Court of Requests, an Hospital, and Convict sheds. The frontiers of the Province, as in Pegu, are often disturbed by gangs of Malay marauders from the neighbouring territories. It has been found extremely difficult to restrain these depredations ; and the

only course that lies open is to hold the petty Malay rulers, from whose quarters these raids are made, responsible for them. We believe they would then immediately cease; for unlike the Eastern borders of Bengal or the hills of Beloochistan, the country round the Province is under acknowledged and recognised Princes.

One point of interest, both to the antiquarian and the ethnologist, in Province Wellesley, is, that remains of Hindoo temples and mounds of shell-fish have been discovered on it by the late Colonel Low and by the present Magistrate of the Province, Mr. George Windsor Earl. These discoveries confirm the conclusion arrived at from other sources of the ancient wide-spread area of Hindooism, and lead to the inference, that the Aborigines of the Peninsula, the Yakoons, are of the same family with the Dyaks of Borneo, the Batlas of Sumatra, the Andamanese, the Karens, the Sontals, Coles, Gonds and the rest of the aboriginal tribes of India, South Eastern Asia, and the Indian Archipelago. The shell mounds have been discovered not only in Province Wellesley, but only lately in the Andamans, and far off in the Valley of the Nerbudda; and the Dyaks at the present day practise eating shell-fish to such a degree and in such a curious mode, that we can easily conceive how these mounds came to exist.

As for the trade of Pinang, after having risen to something considerable in the earlier part of this century, it began to decline with the increase of Singapore. Of late years, however, it has shown a tendency to rise again, and while in the year before last it amounted to £3,000,000, last year it was very nearly £4,000,000. We have no doubt that Pinang will steadily grow in commercial prosperity with the increase of cultivation on the Island and the Province, with the more settled condition of the neighbouring Malay States, and with the increase of the trade with Sumatra; on all which sources of wealth more attention should be bestowed than is at present done. Tin, ivory, gutta percha, rattans and pepper, are imported in exchange for paddy, piecegoods and muskets, for export to European markets; and sugar, spices and rum are largely produced and manufactured in the country itself for exportation.

Before closing this article we shall briefly consider two important points connected with the Straits. First the sources of revenue to the Government. These are the opium and spirit farms, and the sale of lands. There is no Land tax, no Customs duties. The receipts from the sale of lands will some day, perhaps not very far off, cease. As for the opium and spirit farming, on which the Straits income chiefly depends, we need

hardly say that it is immoral and demoralizing. When the receipts from the sale of lands cease, the colony, for then it will have become one, must either impose customs duties, which it would be unwise to do for many years to come, or devise some other expedient. We believe that of all the East, the Straits is the fittest place for the imposition of a *poll-tax*. One of a dollar a head for all male adults and half a dollar for male infants, would bring in an annual revenue of about 120,000 dollars. The population of the Straits with the exception of a few hundred paupers, is composed of men who are able to pay a dollar or two a year without feeling it. This expedient will probably have to be resorted to at no distant date. As for the revenue derived from opium it can be increased twofold without injuring it and with much good to the reckless consumers. The propositions that have sometimes been made to establish gambling farms, and give out licenses to fallen females, we cannot but regard with abhorrence in the case of the former and with distrust in the case of the latter. Gambling is a national Chinese vice, and it cannot be eradicated all at once. Heavy penalties, inexorably exacted, with a good detective and incorruptible police, would soon root it out. As for the other, it has not succeeded in Hongkong (partly it may be because unlicensed females are also allowed to exist,) and on the Continent of Europe, in France and Italy, it does not form any source of profit to the State,—it only serves to prevent the propagation of disease and misery. Were it, however, only to work these ends, it would be of use; but there would be no profit, as the number of these females throughout the Straits does not exceed 1200, it would be as much an act of charity to the public as the establishment of a Lock Hospital, and more appreciable, as ‘prevention is better than cure’ But we fear, that no supervision, such as exists on the Continent by surgeons, could ever be exercised in the Straits.

The second point to which we would wish to draw attention is the purpose which Sir Stamford Raffles had in view in founding Singapore—*it was to act as a centre of civilization to the populations of the Archipelago*. But has it been such? This great end of the existence of the Straits Settlement has been lost sight of. Very little save commercial influence, and the example of law and order accompanied by prosperity, have been the results of its existence to the natives of the Archipelago and the Peninsula. There is yet the same dense ignorance and the same misrule prevailing among the natives as there ever was. Two things seem absolutely necessary to enable the Straits Settlements, and especially Singapore, to carry out the spirit of Sir

Stamford Raffles's views. First, British influence should be made to be *felt* throughout the Peninsula and the North of Borneo; and secondly, the standard of education should be raised far above its present level. As for the first, when the Settlement has become a colony it will be compelled to take up a decided position; but as for the second, we fear, that in the midst of increasing commercial excitement, it will be entirely lost sight of and forgotten, but it is for this very reason, that we have so earnestly drawn attention to the subject throughout this article.

ART. III.—1. *Report on Popular Education in the Punjab: for the year 1860-61.* By Captain A. K. Fuller, Director of Public Instruction.

2. *The Friend of India:* Vol. XXVII, Issues of 7th February and 29th August, 1861.

3. *Popular Education in England:* Edinburgh Review, No. CCXXXI, July 1861.

THE cause of Native education is the cause of civilization and progress. Whatever theorists may say, it is practically true that national ignorance is the forerunner of national disaster, of national vices, and ultimately of national ruin. This truth has been asserted so often, and asserted with so much confidence, that there has arisen hesitation as to its justness. It has been regarded by its expounders as so palpable a truth, and has so often been demonstrated to be so, that they may be pardoned who have occasionally repeated its principles without caring to defend the premises on which they stand. Scarcely a single journalist would dare to resist what is believed to be the general conviction on this head. Yet what is the popular opinion? Perhaps not one in ten of the hundreds of European gentlemen in some way or other employed in India gives his voice in favor of the enlargement of the scheme of national education for this country. Those indeed whose votes are worth having are all but unanimous in supporting the cause of education: yet the numerical bias is undoubtedly against it. This is but another instance of the marvellous and inherent power of Truth, and of the respect it commands as well from foes as from friends. What men do not believe they are willing to run down. But when men find themselves disbelieving what they have the sense to perceive wins the approval of the more intelligent members of society, their incredulity seldom manifests itself in criticism, and the cause of truth is secure even against their mutterings.

It is scarcely necessary to repeat now, that the natives must be educated. To those who are sceptical on this point experience has indeed spoken in vain. To them in vain History has opened her sable page, and pointed with trembling finger to the leaves that tell of the tears, the agonies, the despair, the prostitution of national energies springing from ignorance,—if History has failed to teach this it cannot be that we shall succeed.

Perhaps to no class in India are entrusted duties so onerous, and so difficult as to our Missionaries of whatever persuasion. Theirs is the task to revive a dying civilization, to set together the pieces of a mind all but broken asunder by centuries of ill-usage. It is no unworthy element of their high aims that with them the cause of Education is identical with the cause of Christ's religion. The intelligence that springs from knowledge will, it may be hoped, be eventually an important channel for the introduction of religious truth. This intelligence is requisite, not only for the apprehension of the lofty morality of the Gospel, but also for the repudiation in the first instance, of the detestable impurities of Paganism. Before men will consent to believe a new truth, they must be dispossessed of what they already believe in opposition to it. Before they accept your premises you must convince them of the falseness of theirs. Ignorance is ever the ally of presumptuous confidence. And until its clouds are dispersed, the rays of truth will strike but feebly and fitfully.

The immediate effects of many great improvements and reforms have often the appearance of vices. The curse of evil is so comprehensive in its subtle bitterness, that it seems, as if no good may result without some attendant calamity. It is so with Education. Like other reformatations, the reformation of the intellect must be gradual and progressive. Again, as happens to other reformatations many are found who take it up as a false cry, many who regard it as a mere sentiment, many who repress it because of their conservative tendencies, and many upon ultra-radical principles clothe its progress with a temporary madness, deforming its natural beauty. It is not likely that Native Education in India will suffer from haste, for this requires resources, and resources come in tardily. But it is equally true that the natural progress of the native mind, in awaking from its sleep of ages to some consciousness of better aims and higher duties, has, not from haste to develop it, but because it was natural that it should be so, produced, in one province of India, results that are in a certain sense unjustly deplored. We are told, that in Bengal, Education has taken a capricious direction, and reduced the people, that have first come in contact with it, into little better than impious deists and worthless profligates. It may be so. It may be that the consciousness of unusual liberty, with an unusual absence of restraint, has brought with it an era of reckless extravagance and profusion in the use of the thinking powers. Yet we see no cause for discouragement in this. For to us the conclusion of the drama, of such momentous human

interest, is not and will not be visible. There must inevitably be a long period of convalescence before the moral health of the people is re-instated. The longer the native mind has been in a state of thralldom, the worse will be its conduct when its freedom is once assured. But we must not lose sight of the reaction that must sooner or later come. It is surely an advance not be despised that the awaking mind looks back with some scorn on her past bondage, that the follies and the superstitions of the past are crumbling out of the memory.

Whatever, the progress of education may have been elsewhere, in the Punjab it is in its very infancy. Before we go any further, it will be satisfactory to our readers to lay before them a brief account of the manner in which the department of Public Instruction is administered in the Punjab.

The immediate head is, as in the other provinces, a director of Public Instruction, who, until the late centralization of accounts in his office, had little enough on his hands. The work of inspection and examination of schools, and the apportioning of patronage in the appointment of schoolmasters, rests chiefly with the Inspectors, three in number. The Director enjoys a substantive salary of 1200 rupees per mensem; the Inspectors draw between them 1800 rupees. This, it will be seen, is immensely below the average expenditure in Bengal or elsewhere. But the present state of education in the provinces does not permit of increased expenditure on this score. The Divisions appertaining to each Inspectorship are styled respectively the Amballah circle, the Lahore circle and the Rawul Pindee circle. The Amballah circle comprehends the country lying between Delhi and North West towards Ferozepore. The central portion of the Punjab is comprehended in the second or Lahore circle. The Rawul Pindee circle stretches away towards the frontier. There was not, until the last few months, any native supervising agency. The work of inspection and examination of schools, of all grades and of all descriptions whatsoever, rests almost entirely with Inspectors and with District officers whose connection with the Department will be explained further on. The Inspector is completely severed from office work and the burden of accounts, and is thus quite free to devote his energies to his more legitimate duties. The general direction of schemes of Instruction and control of the Department, together with the entire management of accounts, appertains to the Director.

Schools are of three kinds. Zillah or Country Schools, Tehseeli or City Schools, and Village Schools. The control of the Zillah Schools is in the hands of Inspectors. The control over the rest,

comprehended under the general name of Vernacular Schools, is entirely in the hands of district officers, who are expected themselves, as well as are their assistants, European and Native, to inspect and examine the schools, the appointment of teachers resting with Deputy Commissioners. The Inspector's connection with the Vernacular Schools consists in an annual visitation of as many as he can reach, and in the submission of periodical reports on their condition, and suggestions for their better management.

The study of the English language is compulsory in every Zillah School. As yet of course this study is in its infancy. But, as a principle, the chief stress is laid upon proficiency in it. Miscellaneous knowledge is conveyed through the medium of Urdu and Hindi. These Schools are thus known as Anglo-Vernacular. The study of English has lately been conceded to Tehseeli Schools but conditionally; Government contributing a grant-in-aid equivalent to the amount raised by public subscriptions, assignable to this special purpose. The expenditure on account of Zillah Schools is drawn from the Imperial Revenues. The expenditure on account of Vernacular Schools is derived from a Fund created by the levy of a cess of one per cent on the net land revenue of the province. In addition to the expenditure on account of Zillah Schools with which the Imperial Revenues are burdened, these have to sustain the expenditure incurred on account of Normal Schools. These are institutions for training teachers destined to preside over the Vernacular Schools of the country.

Lastly, in the matter of grant-in-aid schools the principle is to withdraw a Government School where a non-Government School is being prosperously conducted; and for Government to contribute an amount equal to that assigned from the Mission Funds for educational purposes. The principle adopted by the local Government in relation to these schools is eminently liberal, and might with advantage be copied by the Government of the North West Provinces. The education officers simply inspect and examine the schools, reporting on them specially once a year. No further interference is permitted. The scheme of studies rests with the managers of such schools, who are simply required to keep the school in a state of efficiency, in return for the aid rendered by Government.

The above will, we trust, convey to the reader some notion of the principles on which public instruction is carried on in the Punjab. For further information we must refer to the report for the year 1860-61. It is a bulky volume containing a mass of valuable information and statistics. Valuable, however, as the

information is, it is too ill put together to arrest the attention of the ordinary reader. The style is scarcely above that of a juvenile prize-essay, and often detracts from the merit of matter that is really sound and substantial.

The total number of pupils under instruction during the past year was 37,280. The population being rated at 14,794,611, it is at once evident, as Mr. Secretary Davies says, how inadequate are the means of instruction, and of the people how few make a use of them. In England and Wales in 1859 the number of children under instruction was, according to official reports, as high as 2,535,462. The number in some of the leading continental countries, compared with the numbers in England and in the Punjab, may be thus stated: the number of persons receiving instruction in Prussia (where it is compulsory) is 1 in 6·27; in England and Wales 1 in 7·7; in Holland 1 in 8·11; in France 1 in 9; and in the Punjab, about 1 in 396!\* Quoting 'from Mr. Davies' letter—'of the pupils 3,912 attend superior 'schools both Government and Private, and as a rule acquire a 'knowledge of English; and 33,368 attend inferior schools, in 'which the vernacular is the medium of tuition.' By 'Private' are of course meant supported or grant-in-aid (mostly Mission) schools. The total expenditure for the year was Rs. 418,510, of which Rs. 229,101 were derived from the one per cent cess paid by the agriculturists, and 'only Rs. 148,510, from the general revenues of Government.' It is useless perhaps at a time of financial pressure like the present to point out the discreditable smallness of the sum expended on education by Government. Yet even as a financial measure it were surely worth while taking some effective measures to reach those classes of the population who, when enlightened, always add to the strength of the state, but who, when uncivilized and uneducated, are invariably the dangerous classes. Further on we read:

'The Superior Schools have increased during the year from '6 to 20. There are 2,066 names, on the rolls. The preponderance of Hindoo students is remarkable, there being 1572 of 'that denomination to 377 Mahomedans, and 117 others; in 'all 2,066. The charge for these schools amounts to Rs. 55,305; 'Rs. 3930 are paid in fees. The Delhi School is the only one 'containing more than 300 pupils. There is no other school containing more than 200'.

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\* If we accept the number of scholars attending private schools as being equal to the number attending in Government institutions, the total average would be still enormous, about 1 in 200!

‘The Inferior Zillah Schools contain 243 scholars, of whom 169 are Hindoos, and 71 learn English. The charges amount to 2,610 rupees, of which 90 rupees are contributed by fees. It is satisfactory to observe that the average attendance at the Zillah Schools has during the last five years increased from 1,443 to 2,018; and that the character of the education afforded has improved in a much greater proportion.’

The Tehseeli Schools, from the conversion of some into Zillah Schools, fell from 140 to 123. The scholars have decreased from 10,353 in the preceeding year to 6,437, and the daily attendance from 7,636 to 4,564. Here again the Hindoos preponderate, the proportion being as follows: Hindoos, 4,282, Mahomedans 1,741, other races 413. Of the pupils 2,934 were studying Persian, 5127 Urdu, 1229 Nagri, and 161 other dialects.

Village schools ‘have been reduced in number from 1,704 to 1,686, the scholars from 37,000 to 32,165, and the daily attendance from upwards of 30,000 to 26,867.’ There were studying, Hindoos 15,876, Mahomedans 13,390, others 2,899. The numbers studying each vernacular dialect were, Persian 14,237, Urdu 27,442, and Hindi 4,518.

The cost of educating each pupil during the year has been, in the superior Zillah schools, 31-5-0; in the inferior Zillah schools 10-5-9; in the Tehseeli schools 6-7-10; and in the Village schools 4-10-3. The average cost for each scholar in England was during 1859, 30s.; in Ireland it is stated to be only 19s. Considering the circumstances under which the Department of Public Instruction in India is placed, the charge for education in the Punjab seems moderate enough.

Of Female schools ‘there are 38 under Government supervision, supported like other vernacular schools from the one per cent fund.’ Of the whole number 29 were organized in the Jullundhur district, under the personal direction of Captain Elphinstone, the Deputy Commissioner. There were altogether 812 scholars at the close of the year, and the average number attending daily throughout the year was 671. In another portion of his report Captain Fuller says ‘Mr. Spencer (one of the Inspectors) suggests the expediency of providing industrial occupation for the pupils in Female schools. This might be found practicable and useful in the case of the poorer classes.’ The proposal is, at all events, worth consideration, there is an excellent orphanage at Loodianah under the charge of the American Mission, for the support of Native Christian Girls, in which the principle of industrial occupation is advantageously carried out. The girls are not over educated. And those of the

higher classes are at all times able, on occasion, to gain a respectable living by means of the trades taught them by their teachers.

Of the Normal schools there are 8 altogether, a very fair number; but we shall have more to say about them presently. It will be remembered that these have been established with a special view to training teachers for Tehseeli and Village schools. The number of students on the rolls were during the year from 325 to 451, but the average attendance was only 352.

The cost of supporting each pupil during the year was 85 rupees. The period passed at the Normal school is only six months, but it seems impossible to extend it in view of the immense number of teachers to be educated, still every effort should be made to lengthen their stay as much as possible. Somewhat analogous to this is the pupil teachers system as organized in England. It appears to be the most popular portion of the Government scheme of education, the reasons for which are very clearly pointed out by the Edinburgh Reviewer. 'The exact amount of public money' he writes 'spent on the education and maintenance of these young persons may be taken at more than 150£ a head.' The result does not correspond satisfactorily with this heavy outlay. The over-education of the pupil teacher lands him after a time in a situation where his position becomes intolerable to him, his duty is neglected, and the circumstance of his own high training forbids the exercise of a commensurate interest in the elementary branches of instruction. The elementary branches of instruction indeed, as Reading, Writing, and Arithmetic, are found to be precisely those studies in which most proficiency is needed, but in which least proficiency is attained. It would be wise to bear this in mind ourselves in arranging any scheme of education. Yet we apprehend that the extension of the system (it has scarcely made a beginning in the Punjab) in India would be fraught with the very best results. In England the market is too overcrowded with educated men for a scheme on such a scale to answer. In India it is the want. And any plan, that ministers to it, ministers to the progress, the vigor, the rise of the nation.

The Grant-in-aid System is no longer on its trial. For experience has over and over again proved the beneficial effects of its action. The amount expended on this score has been increased from Rs. 1,350 to Rs. 22,287. The greatest satisfaction has resulted from this increase, and from the principle of meddling as little as possible with the interest, economy, and discipline of the institutions receiving the grant. There are twenty grant-in-aid

schools altogether. These include the Henry Lawrence Memorial Asylum at Murree, and, we believe, nearly all the schools established in the Punjab under the superintendence of Missionaries.

The total number of schools and scholars at the close of the year we may reduce into a table as below :—

	GOVERNMENT SCHOOLS.						Private Schools.
	Zillah	Tehsili.	Village.	Female.	Schools.	Total.	
Schools ... ..	23	123	1686	38	8	1878	20
Scholars ... ..	2329	6437	32,165	812	451	42,194	2287

Compare with this the following number of schools and scholars in England and Wales in the year 1858 :—

	WEEK DAY			SUNDAY	EVENING.
	Public	Private	Total.		
Schools ... ..	24,563	34,412	58,975	28,872	2,036
Scholars ... ..	1,675,158	860,304	2,535,462*	2,411,554	80,966

It should be remembered, with regard to the first table, that indigenous schools, or schools established by natives in various parts of the country, have not been included. They are not however very numerous.

The most remarkable feature perhaps of education in India, is the utter and unmistakeable apathy with which the aristocracy of the country view the subject; and the amount contributed by private individuals, while it is discreditable to the public spirit of the country, illustrates but too emphatically the unhappy disunion existing between the rich and the poor. The despotism of past centuries, and the absence of any constitutional restraint on the passions and appetites of the various classes of society, have fixed so great a gulf between the rich and the

\* 'Of this number 917,255 were in 1860 on the Books of schools in receipt of grants from Government.' Note by Editor Edinburgh Review.

poor that we seek in vain for any feelings of kindly sympathy among them. The total annual value of endowments did not exceed Rs. 7372. Of these, the most munificent is that presented by the Nawab Faz Alli Khan to the foundation of the Delhi school. The annual value of this endowment is Rs. 6000. Five hundred rupees yearly are also received from the enlightened Seikh, Maharajah Dhuleep Sing. The total annual value of endowments in England in 1859 amounted to £400,000.—Enough however of statistics for the present. We shall now proceed to notice some of the principal educational measures carried out by Government during the past year.

In contemplating the decreased rate of attendance, and the falling off in the number of schools, there should be no cause for discouragement. The causes that have specially operated to produce this, were, ‘(1) the famine, (2) the levy of fees, (3) ‘the strict rules for removing the names of constant absentees ‘from the school registers, and (4) the absence of influential ‘teachers from their schools, while training at the normal institutions.’ Leaving out of account the famine as an accidental occurrence, we have to consider the remaining obstacles to educational progress.

The levy of fees was one of the most important measures of the year. The civil authorities do not, as a rule, appear to approve of it. Very little information indeed is afforded us on this subject in the Report, to enable us to form an accurate opinion. The principle itself is undoubtedly a just one. Nor do we ourselves think its application altogether premature in the present instance. But we cannot as yet be quite certain what the general opinion is both of officials and of the people in reference to it. Of the three Inspectors one is inclined to qualify its application in some localities, and a second disapproves of the plan of taking an entrance donation, on the ground that it partakes too much of the nature of advances, and is not understood by the people. The rate of fees and the amount of entrance donation are both inconsiderable. The former varies from two to eight annas a month, and the latter amounts to one rupee. Both are levied from non-agriculturists, those subscribing to the one per cent cess, being altogether exempt. The total amount collected during the year appears to be as follows:—

Zillah Schools.	Tehsili.	Village.	Total.
Rs. 4020-1-10	1308-6-7	2919-14-4	8248-6-9

The introduction of the Bible into our schools, not as a class book, but to be read voluntarily out of school hours, was not the least of the improvements effected during the year. It is astonishing to find with what reluctance this step has been at last taken. The education despatch of 1854 sanctioned the study of the Scriptures under certain restrictions. Yet it was not till the accession of Sir Robert Montgomery to power that the orders of the Court of Directors were carried out. The restrictions spoken of are these: the Bible must be read out of school hours; the study must be conducted by a Christian teacher; and the desire for it must emanate from the spontaneous will of the pupil himself. Nothing more could be desired, for nothing could be more emphatically just.

We stated in an earlier portion of this paper that purely Vernacular schools are under the direct control of the local Civil authorities. This requires explanation.

The original organization of the department under the auspices of the late lamented Mr. Arnold included a native supervising agency, and placed all schools under the control of the Education Department. Experience quickly proved the defects of an administration on such a plan. The Civil officers having no connection with the schools never troubled themselves about their condition. The notion of education was itself unpopular with the people, and its dissociation from the Civil authorities increased the unpopularity. This evil attracted the notice of Government. In January 1860, Sir Robert Montgomery issued instructions to the effect, that from the 1st of May next, all Vernacular (*i. e.* all Tehseeli and Village) schools should be separated from the Education Department, and made over to the district officers; that, to meet the want of qualified teachers the Normal schools be improved, and the application of their principle extended. All details were to be carried out by Captain Fuller Director of Public Instruction. Accordingly, the district authorities took charge of the schools; and the benefit of the step, though from special causes not very great last year, will become more perceptible as time develops its results. Some improvements were also effected in regard to Normal schools. Unfortunately, one measure of the very last importance was totally lost sight of. The Native supervising agency was abolished but nothing was appointed to take its place. Some twelve months later an attempt was made to correct the evil. But not before progress had been seriously retarded, and a feeling of doubt as to the permanency of the department itself widely diffused.

It was presumed at first that Civil officers, with their assistants, European and native, would step into the shoes of the old native agency without difficulty. Now, as far as the weight of personal influence availed for the collection of scholars, the presumption was by no means unwarranted, and has in fact been amply justified by subsequent results. But what was wanted was a professional agency for the periodical examination of schools. This agency was not supplied. It was rather too much to expect an ignorant native official to conduct an examination in subjects which had never come within the scope of his narrow education. The best of these officials are tolerably good Persian scholars, but more ignorant of such subjects as Mathematics and History than a boy in the lowest form of an English school. While the Civil officers, moving about only during four months of the year, have not leisure to spare from their more legitimate functions. This was fully recognized afterwards at the close of the year, when it was ruled, the Report informs us, that the allowance of the chief educational Mohurrir of each district should be slightly raised, and travelling allowance added, to promote his activity in the inspection and examination of schools. We cannot accept this measure as at all satisfactory. Neither the precedents of the wretched drudges called Mohurrirs, nor the very inconsiderable remuneration offered, can supply what was and is so eagerly called for, an efficient supervising agency composed of men of standing and ability.

One of the most curious features of this Report is the absence of what may be called special knowledge in the initiation of several educational measures. We will illustrate our meaning by a few examples. We are told that an improved system of translating from one language into another has been introduced; that the teachers are about to be told something of what is required of them; and we have a few original remarks in favor of the system of 'cramming.' We read with astonishment of an Inspector recommending the ordinary method of 'construing' followed in our English public schools to be adopted in our native schools. What practice could have obtained previously, it is hard to conceive. We give the extract below in which the Director receives the suggestion and recommends its adoption.

'Mr. Spencer thinks that if native boys were made to construe English, word for word into the Vernacular, in the same way that an English boy is taught to construe Latin into his own tongue, still greater accuracy (in the matter of translation) could be attained, and the habit of translating too freely would be avoided. He states his view in these words: "The system of translating

“ ‘not word for word, but first that word in the English whose  
“ ‘equivalent occurs first in the Urdu sentence, then the English  
“ ‘word whose equivalent occurs next also in the Urdu version,  
“ ‘and so on, necessitates both accuracy and idiomatic expression.  
“ ‘For when a sentence cannot be taken to pieces, as it were, then  
“ ‘it may be rendered as a whole.’ This appears a very sensible  
‘proposal, and I shall be glad to see that Mr. Spencer has been  
‘able to introduce the plan into the Zillah schools of his circle.’

‘The same Inspector objects to the Persian class-books being  
‘published with Urdu translations, as the boys commit the latter  
‘to memory, and take no pains to make out the meaning for  
‘themselves. To aid them in the latter object Mr. Spencer sug-  
‘gests that vocabularies should be added to the Persian books,  
‘giving the Urdu equivalents of all difficult words. I agree in the  
‘necessity for a Persian-Urdu vocabulary or small dictionary being  
‘compiled for the use of our schools. I will endeavour to bring one  
‘out as early as possible. I do not believe that the translation  
‘does any harm, or that the boys commit it to memory, and I am  
‘sure that it is of much use in enabling a pupil to study by himself.’

This is rare logic. It is admitted that a boy has no vocabulary or dictionary to aid him in the task of translating by the force of his own intelligence; it is admitted that he has a ‘crib’: ergo, that his task of translating is not a task of committing to memory! These translations are of excellent service in the hands of a grown-up person desirous of simply acquiring knowledge, and sensible of the exact amount of help they should bring him. But in the hands of a boy, they are merely a premium on carelessness and superficial knowledge.

With regard to the last and the most important point to which we would invite attention, we read in the Report that manuals have been prepared, to be put into the hands of teachers, pointing out the chief subjects that require their attention. These manuals should have been ready months ago. It is admitted on all sides, that the greatest obstacle to educational progress is the professional and scholastic ignorance of the very best of our native Teachers. We apprehend that if this sensible measure had been adopted earlier, we should have made some progress at least in the professional training of our employés. In relation to this we are told, and we readily believe it, that wherever the trained teachers arrive, a marked improvement takes place in the condition of the school. But we should be glad to have some further information on this head, especially with a view to the question, whether the teachers are trained professionally as such, or simply have their ‘scholastic attainments’ brushed up.

We observe with pleasure that Captain Fuller has insisted so judiciously on the necessity of having written examinations of schools. Judging from the general tenor of the report, we should be inclined to suspect that bad reading, bad writing, and ignorance of the elements of History, Arithmetic, and Geography, are the principal deficiencies. These defects shew themselves of course more largely in the lowest grade of schools. But these, it must be remembered, are not the least important schools, and it is unsatisfactory to find that even the teachers in them are almost as bad as their pupils.

It is startling to find how the very same results have shown themselves in schools in England, but from causes exactly the reverse of those that have operated in this country. In India ignorance in the elementary branches of knowledge is due almost entirely to the incompetency of the mass of teachers in our Vernacular schools. In England, ignorance in the same subjects has been due lately to the over-education of the pupil teachers who, when they enter upon the position of teachers, 'naturally think 'more of what education has made them, than of what it first 'found them. They easily lose sight of the fact that they have 'risen from a very humble social position, and they crave for that 'status which education seems generally to secure. 'I think, too,' the writer proceeds, 'that in some cases they are too apt to forget that they owe the culture they possess to the public provision made for them, &c.' Again, in another place, 'the junior 'classes of schools, comprehending the majority of children, do 'not learn, or learn imperfectly, the most necessary part of what 'they come to learn—reading, writing, and arithmetic.' These are the words used by the Commissioners appointed to enquire into the state of popular education. Further on, the Edinburgh Reviewer writes:—'But is this class of highly accomplished 'school-masters, fresh from training colleges, which certainly 'surpass in many respects our highest public schools, exactly 'the class of men best adapted to the instruction of children 'under ten years of age, in the first steps of human knowledge? 'The Commissioners reply in the negative. They are perfect in 'all respects *except that of teaching the junior classes*, including '75 per cent of the scholars, those rudiments which are most 'needed. So that the whole system of the Committee of Council on Education, lands us in this absurd result—that we have 'created at a vast expense a body of men and women so superior 'to their station in life and to their humble work, that they 'cannot subsist without a vote in aid of their incomes from 'Parliament and the Privy Council, and that they do not perform

‘with effect the drudgery of teaching very young children to ‘spell and to cipher.’

The writer then goes on to remark on the injudicious practice, with most teachers, of spending all their time and trouble on a few leading boys, to the utter neglect of the majority of scholars. This is an evil too often encouraged by Inspectors and Visitors themselves, who should guard against forming their judgment of a school from the attainments of two or three of the ‘best’ boys.

‘The true value of a school to the country, does not consist in ‘the accomplishments of its head master or the proficiency of a ‘few leading pupils, whose superior abilities make them objects ‘of interest to the master himself, to the managers, and to the ‘Inspector. These are a minority who may, and probably will, ‘rise to a higher station in society; or, as is now very frequently ‘the case, they already belong to a higher station; for many parents in the middle ranks of life, finding how excellent an education can be obtained for next to nothing, now send their children to the popular schools, where of course they take a high ‘place and attract to themselves the advantages designed by the ‘Parliament and the State for their poorer neighbours. But the ‘real test of the value of a popular school is its effect on the ‘ignorance of the country, its relation to the large majority of ‘children in the humblest station, to that immense body of human beings who have no other instruction, no previous knowledge, ‘no further assistance when they enter upon the hard and rude ‘lives they are doomed to lead. Tried by this test, the Commission tell us, that the results of the present system are scanty ‘indeed; the upper surface may be brilliant enough, but the social ‘depths are untouched. We are by no means certain, though it ‘may be a heresy to say so, that less highly trained teachers and ‘less artificial methods of teaching than those now in vogue, ‘were not better adapted to reach those humble classes and contracted minds into which we would throw some glimmering of ‘light and knowledge. The teacher must not be too far removed ‘from his scholars; and there was this of good in the old monitorial system of Joseph Lancaster, *that the drudgery of teaching ‘spelling for example, was not thrown upon those who are too accomplished to perform it.* The modern system of highly trained and ‘highly paid certificated masters has, on the contrary, produced a ‘class of teachers who would be most valuable agents for the ‘education of the middle classes, but who are far less qualified to ‘devote themselves to the humbler duties of instructing the lowest class in society.’

The italics are ours. Perhaps in the present state of education it would be too much to expect any very general extension of the monitorial system. However, the subject has been worthily appreciated by the Lieutenant Governor; and we trust Captain Fuller will continue to give it his best attention.

We cannot refrain from copying below some exquisite specimens of answers embodied in the Report of the Commissioners: 'Mr. Forster tells us:—I met with very few day schools indeed in which it seemed that the words read or repeated from a book, even with apparent ease, conveyed any idea to the mind of the pupil. For instance, a smart little boy read the first verse of the ninth chapter of St. Matthew's Gospel, 'And he entered into a ship, and passed over, and came into his own city.' I asked, 'What did he enter into?' 'Don't know, thank you, Sir,' replied the boy politely. 'Read it again. Now what did he enter into?' 'Don't know, thank you, Sir.' In another school, a girl of about thirteen years of age was directed to 'Say her Geography' to me, and after she had repeated the boundaries of several countries, I asked, 'what is a boundary?' 'It's a year's wages.' My question had suggested to her mind the terms on which the pitmen are *bound* for a year to their employment.

Few subjects are so apt to be slurred over in a school as recitation and penmanship. None are more important. Mr. Howard the Director of Public Instruction for Bombay, published in one of his reports some excellent remarks on this and kindred subjects, which deserve every attention. With reference to correct reading, Mr. Secretary Davies writes that wherever in a school there is a Head master of English birth, he should be requested to read out aloud some portion of the daily lessons, and that the classes be taught to repeat after him. The recommendation is judicious.

The standard sought to be attained in the superior schools being the Entrance Examination of the Calcutta University provokes the following remarks from the Lieutenant Governor.

'You have stated at length the curriculum of study prescribed for these institutions, and that the aim is to qualify the pupils for the Entrance Examination of the Calcutta University. But to make these schools popular from the commencement, the Lieutenant Governor is persuaded that it is necessary to enforce a minute attention to some minor details of utilitarian value. The generality of the pupils have no intention of passing the University Examination, Their immediate object is to qualify themselves for employment in the public service, or for intercourse with the best English society. Now, the Lieutenant Governor is far from desiring to limit the scope of your curriculum to these

‘objects. But His Honor considers that it should at least embrace the means of their perfect attainment. I am therefore to impress upon you the importance of enabling the students to acquire a good English accent. His Honor also, with the view of facilitating a colloquial knowledge of English, would insist on the exclusive use of that language in all verbal intercourse during school hours. The Lieutenant Governor believes that he need not advocate the frequent and regular practice of written translation, and of composition in English, without which grammatical accuracy and ease of style are not attainable, and you are yourself justly sensible of the advantages of periodical examinations by written questions, and of the frequent review of weekly work which these imply. The Lieutenant Governor deems it worthy of your consideration whether the prescribed course of study, borrowed as it is from the North West Provinces, may not give an artificial prominence to Urdu, which does not naturally belong to it in these provinces. His Honor is convinced that this is the case as respects the Mooltan, Derajat, and Peshawur Divisions, and observing that, except at Delhi, Persian is preferred in all the private schools to Urdu, he thinks it may be also in other divisions.’

There is in this province, as there is wherever the *name* of the language is tolerably familiar to the people, a decided leaning towards the study of Persian, in preference to Urdu. But this may admit of partial explanation from the fact that all miscellaneous knowledge, as History, Arithmetic, &c., is conveyed through the medium of Urdu, and that to the contracted mind of a semi-barbarian these studies are positively distasteful.

We cannot altogether approve, in other respects, of the scheme of studies for Zillah schools. We think it gives too little prominence to those elementary studies which are the ground-work of all instruction, and that it affords too little time to the preparation of those subjects which are taught in Urdu, and are the most numerous of all. Several of the class books appear to us objectionable, some as not being suited to Native pupils, and others as being calculated to engender a vicious and false style of Persian composition. Any reader who throws his eye over the scheme will readily comprehend our meaning. In conclusion, we think two material points have been quite lost sight of. We have grave doubts as to the propriety of extending the studies over so great a part of each day, nearly six hours. In England, with the advantages of a bracing climate, and teachers capable of attaching some degree of interest to the routine of school study, it has been found that, among the poorer classes, study extending

over more than three or four hours in the day, loses all its value. We conceive that if four hours only were allotted for the purpose of study, the list of class books reduced in the case of Vernacular schools to as simple a programme as might be consistent with actual efficiency, our schools would be more popular, pupils would not be so often removed at critical moments to gather in the harvests or take to the plough, and a positive gain in the matter of attainments would result.

The second point we notice is the entire absence in the 'scheme' of any work calculated to acquaint the pupil with the nature and system of the laws under which he lives. We understand that the Lieutenant Governor has directed the voluntary study of the Punjab Civil Code to be encouraged. But this is not enough. In a Province where law is administered on so simple and easy a plan, there should be no difficulty in an ordinarily advanced pupil mastering all necessary details. The advantage of such knowledge cannot be overrated. It would strike a severe blow on the pernicious system of 'middle men' so common in this country, and which is at the bottom of no small part of the litigation of the country. Not to say that it would prepare the way for the creation of a competent and well informed body of law officers, which must come into being with the progressive growth of society, and the consequent advance of commercial relations calling for a more complex system of legislation. Nor should we forget, that wherever the general community of any nation has been ignorant of the leading principles of its laws, great oppression has resulted, and that the political happiness of any people is mainly to be estimated by the degree of intelligence with which the principles of legislation are known and understood.

No summary of educational progress would be complete without a reference to the school established at Lahore, for the special purpose of affording instruction to the children of the aristocracy of the country. It consists of two departments, an upper and a lower. The former is intended for the sons of the various Seikh Sirdars and other chieftains of the province. The right of entrée to the Governor-General's Durbar is the standard of admission. We think that Captain Fuller was justified in establishing this, and not a money standard of admission. It is argued, we are told, that an invidious distinction has been introduced between high and low which never existed in a Native School; that no such line has been drawn in any Educational Institution of the other Provinces; and that if the distinction was absolutely necessary, the right of admission into the Upper Department

should have been regulated by the money standard. To the first objection it may be said, a young Sirdar seldom or never attended a Native School, but had a tutor at home, who was permitted perhaps to take in a few other pupils of known respectability. His chief attention, however, had to be given to his patron's son, between whom and the rest of the boys a marked difference of social rank was observed, although they may all, have studied together. To the other objections it is sufficient to say, that if popularity and success can be obtained without forfeiting efficiency or disregarding principle by a measure suited to local circumstances, it is needless to look for a precedent for it elsewhere. The money standard of admission, however acceptable in England, would not answer at Lahore. A sub-committee of five native gentlemen regulate the admissions into the privileged department, and their proceedings seem to have been satisfactory. An entrance donation of five rupees is levied, and a monthly tuition fee varying from one to three rupees. Including the collections of both departments the entrance donations amounted in 1859-60 to Rs. 340: the tuition fees averaged Rs. 125 a month. At the close of the annual examination of the school last year the Lieutenant Governor distributed prizes to the most distinguished scholars, in presence of a large assemblage of European and Native gentlemen. This increased the popularity of the school immensely. And there were, at the close of 1860-61 as many as 186 pupils. The value of this institution is not to be overrated. Praiseworthy as our efforts have been in placing education within reach of the poorer classes, we have been ever too unmindful of securing the influence of the native gentry and aristocracy, which, till the rebellion burst over us, we seemed to regard as a thing of no value. With the wise policy of liberal conciliation so judiciously initiated by the present Governor-General, a new era of progress and of Government has dawned in India.

No journal has more consistently or more ably advocated the cause of Popular Education than the *Friend of India*. But we must be permitted to express our dissent from our contemporary's views on one very important point connected with education namely with regard to the Grant-in-aid system. We are convinced that the time has not yet arrived for a complete withdrawal of the State from educational schemes. We regret the attitude assumed by some of the provincial Governments in relation to private schools. We believe that an extensive application of the Grant-in-aid system would be both a wise and a just measure. But we are not disposed to believe, without

further evidence than is actually before us, that the abolition of Government Schools in the most flourishing province of India, would be followed up by a rapid formation of private institutions. Until our statistics prove to us that education has become a 'marketable commodity,' we should not be justified in relaxing our efforts to assist the people out of 'the darkness which may be felt' from which they are but just emerging. In the *Friend* of the 7th February 1861 we read;—

'From a careful examination of Government Reports and an inspection of schools we hesitate not to say that, with the one exception of the Presidency College on which enormous sums are squandered, non-Government education in Madras is superior in character and extent to that offered by the State. In Bengal, although the Grant-in-aid system has been still less encouraged, the results are almost equally gratifying. Of 18 affiliated Colleges, 8 or nearly the half have no connection with Government, and require no aid from it. In the entrance examination in 1861 the percentage of candidates educated in private schools was so high as 35. If we omit the Presidency College, which is supported at a ludicrously disproportionate cost by the tax-payers of India, we shall find that in all respects non-Government education in Bengal is equal to that given by Government. And this in spite of the almost total denial of Grants-in-aid, of the fact that the missionary schools look less to the secular than to the religious element of education, and that all the best natives, in point of intellect and position, are induced to enter the state schools, with the true respect of a Hindoo for the Sirkar, and dislike of an Asiatic to pay a fair price for an article which he thinks he ought to receive for nothing. These are wonderful results. What would they not grow to if the present monopoly were abolished?'

So far as these remarks apply to the presidency towns, or those localities where non-Government schools are as prosperous and numerous as our state schools, our judgment is precisely the same.

It may be unorthodox to say so, but we cannot help concluding, with our contemporary, that the "cumbrous machinery" of a Director and Inspectors produces results altogether disproportionate to the outlay incurred. In the Punjab, *all* the superior schools could be visited and examined periodically by only an energetic Director, call him by what name you will. The vernacular schools, now that they have been made over to civil officers, do not require the expensive agency of highly paid Inspectors to keep them going. No Inspector ever succeeds in

visiting even half the number of schools in his circle, during one year's tour. And those schools that are visited are visited so desultorily, so hurriedly, that it is impossible that the inspection should be thorough. Our plan then is this. Abolish the three Inspectorships now existing, devoting the saving thus effected (upwards of three thousand rupees a month) to a purpose we will presently indicate. In place of the wretched Mohurrir, who is at present occupied in supervising vernacular schools, engage an able native Inspector on not less than 100 rupees a month, for each district. He should be of equal rank with the Tehsildar, and subordinate directly only to the officer in charge of the schools of the district. These could be paid by the savings effected by an abolition of all the Chief-Mohurrirships, and by an extra charge on the collections of the one per cent cess. Above all, the system of making all the civil officers of a district responsible for the well being of schools should be abolished. What is the business of every body is the business of nobody. In most cases the Deputy Commissioner would be only too glad to be rid of what he cannot help considering an extra burden, and to transfer all responsibility to some one of his qualified assistants—an European of course. The appointed Assistant should be held immediately responsible for all short comings. At the same time, not to withdraw entirely the support of the other officers of the district, these should be obliged to inspect and examine every school in existence at the various localities they visit during their cold weather tour.

We have said that the want of qualified teachers is the chief evil which the educationist has to meet. The foundation of every scheme must be trained native teachers. What is wanted is an all but unlimited extension of the pupil-teacher system, and first class training colleges for every grade of teachers. The suggestions we throw out correspond substantially with the admirable scheme sketched out by the *Friend of India* in his issue of the 27 August 1861. We would have for the Punjab one single first class Training College at Lahore. It would be of course immediately under the Director of Public Instruction. A Principal from an English Training College, on not less than 1000 rupees a month and three native assistants on not less than 300 rupees would form an excellent Collegiate staff. Every teacher of a Zillah or of a Tehseeli School should, each in his turn, be sent to the Lahore Training College, for a period of not less than one year. The Normal Schools at present in existence might be reduced to a third of their number; those remaining being intended for the lowest grade of village school teachers.

The savings effected from this source could be made available in the constitution of the new College.

This should be fitted up for the accommodation within its precincts of between 200 and 300 pupils from all parts of the country. No village school teacher should be promoted to the highest grade of his department without a certificate from the Lahore Training College. Such as from advanced age or absolute incapacity are unable to comply with this requisition should have the option allowed them of sending their sons, or other near relations for instruction. It will be readily understood that no amount of scholastic acquirements will suffice without the possession of local influence. And the position of teachers in many villages is almost hereditary.

The entire cost of this machinery for training school masters would not exceed 4000 rupees a month : while to meet this demand, and others connected with it, we have a monthly saving of 3,000 rupees from the abolition of the three Inspectorships, and savings from other sources credited to the Imperial Funds.\*

We cannot say that we write altogether without hope. While we are not very sanguine of our proposal being adopted in its integrity, we cannot perceive how any scheme of National Education can answer, which has not for its basis, the principles we have been endeavouring to expound. But Education in almost any shape is a boon to be grateful for, because with the progress of Education will be learnt those lessons of self-government which India has never learnt from her own sages and because, if any thing can, Education assuredly will break the cruel bondage of caste, and with the extension of its sway, the shadows of the past will flee away and an era of enlightenment dawn upon India, redounding alike to the glory of England, and the welfare of our Indian Empire.

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\* We do not see why a portion of the one per cent cess should not be put to this use, if Government were not prepared to sanction any further Grant however necessary, or however small.

- ART. IV.—1. *The Culture of Cotton in India.* By Dr. Forbes Royle. 1851.
2. *Report on the Cotton districts lying between the Jumna and Ganges, commonly called the Doab.* By Paterson Saunders, Senior. 1861.
3. *A Month in the Cotton Districts near Bombay.* By W. C. Sillar. 1861.
4. *Official Papers.* Published by the Government of India. 1861.

THE question which at the present time absorbs so much attention is not one of to-day; it has for many years past formed matter for anxiety and grave consideration, not alone on the part of Manchester spinners, and Liverpool cotton traders, but of the Government both at Home and in this Country. It has been long felt that the day must come, when, from some unforeseen and unexpected cause, American cotton would cease to flow into the Liverpool markets, even if it should still find its way to continental marts. The supply of cotton to meet the daily increasing demands of England has therefore been felt to be precarious, and some other source whence to derive the required commodity has been sought with no little anxiety. The very constitution of the American republic has been in itself a warning to all who look beyond the day, that disturbances would sooner or later take place, where so many conflicting interests are pitted one against the other. The question of slavery alone has for years formed an element of discord in Congress, not unfrequently imperilling the stability of the Union, and of late the heavy protective duties imposed by the North, so detrimental to Southern interests, has added one more to the already too numerous causes of dissension. All these elements of disruption and the growing animosity of Northern and Southern men, in which has cropped out the Old Cavalier and Puritan antagonism of the Commonwealth, have clearly pointed to eventual disunion; indeed so opposed and conflicting are the interests of the two, the slave and non-slavery states, that it is matter for surprise that the severance, which has at last taken place, has been so long delayed. But apart from the warnings which of late years have been so often repeated in the dissensions and party

animosities inseparable from every debate in Congress, and the not unfrequent attempts of the Government to fix a quarrel upon England as a means of healing internal feuds, we have had one defacto interruption in the supply of cotton from America which, though by many forgotten, is none the less well remembered by those who, having the interests of millions of their fellow-countrymen at heart, have unceasingly sought to guard against the very danger, which now threatens to overwhelm all engaged in the cotton trade and manufacture of England and France. The War between England and America of 1813-14, which necessarily put a stop to all commercial intercourse between the two countries, even when cotton spinning was comparatively in its infancy in England shewed how injuriously any derangement in the Liverpool cotton market acted on the manufacturers. And as the demand for the raw material has year by year steadily increased, until in 1860 the consumption of Manchester alone did not fall short of 720,000,000 lbs, affording employment to upwards of three millions of the manufacturing classes of Great Britain, it has been a subject for deep and anxious reflection how to avoid any future interruption in the regular supply of a staple, on which so many are dependant for the means of obtaining their daily bread.

Save and except America, India is the only country that can in any way supply to England the quantity of cotton required for her extensive manufactories. To India then all eyes are turned. The Government has been called upon to take its part in meeting the foreshadowed crisis, and private enterprise in one form or another has not been backward in endeavouring to meet the emergency. The Government of India, when a call was first made upon it to take the initiative in furthering the views of Manchester, laid down clear and distinct rules by which alone it would be guided, it defined the course of action to be taken by all its servants, and the amount of pressure to be brought to bear in furtherance of the desired end. The rules thus laid down were just and equitable. It was decided that the Government, beyond making known through its officers the demand for cotton arising in England, should take no direct measures in promoting its cultivation by undertaking any operations not directly within its functions, or which might in any way bring it into competition with private enterprise. But at the same time while deprecating on the part of Government officials a resort to any undue influence which might compromise the Government, or induce the cultivator to look to it as a purchaser for his crop, it authorised all its officers fully to explain to the people the desirableness of paying

greater attention to the cotton crops both in their cultivation and after processes. While restricting itself to measures of this nature, in regard to the promotion of cotton cultivation, the Government was not slow to admit its responsibilities in other respects, or to take measures for speedily supplying a necessity without which no greatly extended production of cotton could be of any avail to England. The great drawback to India's competing successfully with America in the cotton trade has been the absence of easy means of transport. She has few natural highways and still fewer artificial ones. Roads were and are the great desideratum, and to the formation of these the Government set itself resolutely to work. Imperial grants to local funds were apportioned with no niggard hand, according to the known capabilities of each province or district to provide the requisite staples; and throughout Nagpore and the Berar the two largest and most important cotton-fields of India, energetic measures were adopted to supply the deficiency in this respect. In addition to this the Government further proclaimed that prizes would be given on a liberal scale to those cultivators who should produce the most abundant crop of the cleanest and best staple from a field of not less than thirty acres. Commissioners selected by the Chambers of Commerce in communication with the Government of each Presidency were deputed to the cotton producing districts to enquire into the various subjects connected with its cultivation, their capabilities, &c., and to report on the state of the trade, and the facilities for increasing the area under cultivation, as well as on the opening there might be for bringing European Agency to bear profitably in securing the supply of an improved and cleaner article, better suited to the requirements of the Home consumers than that generally exported. As far as the Government was concerned there was little left undone that could with propriety have been effected, without its at once entering on the field either as a producer or as a purchaser of the raw material, of the evil results of which course there can be little doubt. The Government, acting as it did, pursued the better and wiser course. Had the Government taken any active part in encouraging increased production of cotton, there is no question but that the immediate effect would have been to create an unhealthy and artificial trade, which could not have survived the withdrawal of Government from the market; and had it commenced operations as a producer, it would have entered the lists with its own Ryots and would rather have discouraged than stimulated their efforts. On the whole then, the course adopted by the Government of India must be considered

the only legitimate one, viz. to encourage as much as possible, without direct interference with the cultivators, an increase of the area usually devoted to the cotton crop, and by constructing roads to afford facilities for its transport to market at a less cost than hitherto prevailed.

The action of the Government having been thus determined, it remains to consider what other elements have to be brought into play to farther and ultimately to attain the object in view. In the first place it will be requisite to enquire into the nature and value of the reports furnished by the cotton commissioners and what results are likely to arise from the information they afford.

The Report of Mr. Paterson Saunders, Senior, the Commissioner deputed to the Doab, the country lying between the Ganges and Jumna Rivers, has been compiled with considerable care, and in its limited space contains information of a highly interesting and varied character. It is evident from this report that at the present time there is little or no cotton grown in the Doab in excess of the requirements of local consumers, although from the commencement of the present century till within the last thirty years, a very considerable trade was carried on with Calcutta, whence the cotton was exported to China and England. From 1810. 'The Merchants and Planters in the North West had cotton factories and cotton screws at Futtchghur, Calpee and Mirzapore. They purchased the cotton from the natives, cleaned, screwed, packed and exported it to England and China. But the trade gradually died away. The exporters were unable to compete with the cotton grown in the Southern States of America by slave labor and on lands that paid no Government Revenue.' The trade was gradually abandoned altogether, the China requirements not being sufficient to pay the expenses of European Agencies and the maintenance of factories and screws.

Cotton was first imported into England from India in 1783, when the amount shipped was 114,133 lbs; in the following year there were but 11,440 lbs imported and in 1785, 99,455 lbs. During the three following years there were no imports from India at all, but in 1790, 422,207 lbs were received; from this time, excepting in 1792 when there were no shipments made, the receipts gradually though with some fluctuation increased until in 1799 they reached 6,712,622 lbs. In the following year the first large importation from the United States reached Liverpool amounting to 16,000,000 lbs, and the supply from India gradually fell off until in 1809 when it suddenly rose to 12,517,400 lbs and in the following year to 27,783,000 lbs, against 36,000,000 lbs from America. From this time the Indian imports fluctuated greatly until

in 1813, the first year of the war between England and the United States, only 497,350 lbs were received from India, but in the following year the receipts were 4,725,000 lbs, and from this time they again gradually increased until in 1818 86,556,000 lbs were imported against 58,333,000 from the United States. But this was the largest quantity exported by India. In the mean time the supply from the Southern States of America had augmented year by year until in 1836 it had reached 289,615,692 lbs, and in succeeding years it gradually increased, without however much influencing the supply from India, as from 1840 the receipts thence varied in successive years from 77,000,000 lbs to 97,000,000 lbs until in the past year they touched 325,000,000 lbs. It is thus evident that however much the importation into England of American slave grown cotton paralyzed the Indian trade in that commodity, by throwing into the home markets a material produced at less expense to the grower than the Indian staple possibly could, the effect was but temporary, as in the period embraced between the years 1818-19 and 1835-36, the Indian trade had with respect to English markets fully recovered its position. It is quite true that during this period the imports from America had increased from 58,333,000 lbs in the former year to 289,615,692 lbs, and that whereas in 1818 the imports of Indian cotton exceeded those from America by 18,222,000 lbs, in 1836, the excess was in favour of the American production by 213,868,766 lbs. Nevertheless, the actual imports of Indian cotton had in the latter period reached the figure they stood at in the former. The price realized however at the two periods offered a marked difference, and it was in 1818 that Indian merchants first felt the baneful results of American competition in the Liverpool market. In 1817 the prices for this American staple were quoted at  $16\frac{1}{4}d$  to  $23\frac{1}{4}d$  per lb, for Indian  $14\frac{1}{2}$  to  $20d$ . In the following year, while American cotton stood firm at the prices previously quoted, Indian cotton fell to from  $7d$ . to  $20\frac{1}{2}d$ . In 1820 prices were again more equal, Americans from  $8d$  to  $13\frac{3}{4}d$  and Indian from  $6\frac{3}{4}d$ . to  $12d$ ; from this period both gradually decreased in value from the stocks being generally in excess of the demand, and in 1836 we find the quotations for American cotton at  $7\frac{5}{8}d$  to  $11d$ , and Indian at  $5\frac{1}{2}d$  to  $8\frac{1}{2}d$ : in after years both descriptions sank much lower and we find American cotton quoted at  $3\frac{1}{2}d$  to  $4\frac{1}{2}d$  and Indian at  $2\frac{1}{2}d$  to  $3\frac{3}{8}d$ , but these appear to be the lowest figures ever reached.

Notwithstanding the little encouragement offered to shippers from India on account of the trifling demand in which their staple stood, the exports gradually increased subsequently to 1836,

though in some years there was a decided falling off caused by the exceedingly low and unremunerative prices realized, until as has been shown, in the past year the shipments to England from India alone amounted to over 350,000,000lbs, about one half of Manchester's annual consumption.

The chief faults found by English spinners with Indian cotton, are shortness of the fibre, and inequality in its substance to which must be added the careless and impure state in which it is packed. These therefore become the subjects deserving of most attention, and out of them arise questions as to the system pursued in the cultivation and after process, with a view to improvement, and how this may best be effected. To place this clearly before the reader it is necessary to detail the system generally pursued in the cultivation of cotton in India, shewing what interest the Ryot really has, if any, in the production of a better article.

There is no crop which pays the Ryot so ill as cotton; whether it be from want of attention and care in its cultivation, from the absence of all proper and needful preparation of the land to receive the seed, or from defective seed, arising from no care being taken in selecting it, or from one and all of these causes it is quite certain that generally speaking the crop is of all others the least remunerative to the grower. It is a crop therefore he will never grow, unless he is secure of a purchaser before putting the seed into the ground, and out of this disinclination on his part arises the system so baneful to all agricultural progress, that of advances. Every native cotton and grain trader in India has his Agents in the interior; it is these people who enter into arrangements with the Ryot for the production of such staple or cereals as may be required by his principals, or which existing demands and present scarcity may point out as of most importance. In addition to these Agents of the larger native firms every village has its Bunniah or petty trader, who as far as his means admit of, is always ready to enter into speculative transactions, and to defraud the Ryot in every possible way. The chief object of all these dealers great and small is so to make up their accounts with the Ryot as always to keep him in their debt and never by any chance to allow him to entirely work off an advance. By these means he becomes bound to them, and as their slave he must sow such crops as they require and no others, and deliver them at certain fixed rates independent of any fluctuation of prices, and as these rates never exceed the lowest possible fraction at which the Cultivator can produce his crop with a slight margin for profit to himself, he is completely shut out from profiting by any rise in the market. The

natural result of such a system is, that the Ryot's object is to produce his crops with the least trouble, and at the smallest possible expense to himself. Can it then be matter of surprise that foul and impure cotton is the result. Would it not rather be surprising, were it otherwise?

If we look at the cost of cultivating an acre of Cotton as given in the papers before us, and compare it with the same area sown with Jowarie, and their respective yields, we shall find that the latter crop, although in point of market value the least considerable of all cereals, gives a far better return to the farmer.

The Government demand on an acre of first class land is .....	Rs. 2	6	0
Cost of Seed (Cotton) .....	0	6	0
Charges of cultivation, tillage &c.....	1	4	0
Weeding .....	0	4	0
Picking .....	2	12	0
Cleaning by Churka .....	0	6	6
Total Cost Rs. ....	7	6	6

## YIELD.

260 seers of Cotton, which when cleaned will give 65 seers, the average value of which at 6 seers per Rupee is .....	10	13	4
To which add value of 190 seers seed, at 57 seers per Rupee .....	3	5	4
Total Rs. ....	14	2	8
Deduct from this interest at 24 per cent per annum for 6 months on Rupees 7-6-6 .....	0	14	2
Total Rs. ....	13	4	6
From which deduct cost of culture .....	7	6	6
Total profit Rs. ....	5	14	0

But, as the Ryot will have had to make his bargain with the dealer before he would receive any portion of the advance for his crop, his profit would be reduced by the lower rate at which he would have been forced to contract to deliver his produce.

In the case of Jowarie the cost of cultivation and return are as follows.

The Government demand per acre of first class land .....	Rs. 2	6	0
14 seers Jowaree seed .....	0	8	0
Weeding 5 times .....	1	4	0
Reaping .....	1	0	0
Garnering .....	2	2	6
Threshing, or treading out by cattle .....	0	12	0
Winnowing .....	1	1	6
<hr/>			
Cost of production, Rs. ....	9	2	0
Add interest at 24 per cent. per annum for six months on Rs. 9-2-0, .....	1	1	6
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Total cost Rs., .....	10	3	6
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## YIELD.

2½ Candies of Jowarie at Rs. 5-8 per candy .. ...	Rs. 11	11	0
280 Bundles of stalks at Rs. 3 per hundred ...	8	4	9
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Total yield Rs. ....	19	15	9
Deduct charges as above Rs., .....	10	3	6
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Total profit Rs. ....	9	12	3
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Or a gain of Rs. 3-14-3 upon the Cotton crop.

From the above facts it is quite clear that the Cotton crop is the most unremunerative of all to the Ryot, and even Jowarie, the cheapest grain and most ordinary food of the lower orders, offers a larger profit. Under these circumstances it is hardly matter for surprise that the grower pays the least possible amount of attention to this crop, or that he will not take pains to deliver a clean staple, when a foul one, from weighing more and being of larger bulk, will be more remunerative to him, in the first place from less expense attending an imperfect cleaning by the native churka process, and in the second from its enabling him to deliver a larger quantity than he possibly could of clean cotton.

The Cotton in its already sufficiently foul state having passed into the hands of the agent or dealer, it might be supposed that it would reach market without gathering additional impurities on its way, but it is far otherwise, for the agent or dealer in packing it seeks to add to his own or his master's profit by still further increasing its weight and adds sand, or earth to the already far from clean cotton. It is not therefore surprising that Manchester spinners complain of the very unsatisfactory and

uncertain results attending the use of Indian cotton. From the mixture of pod-husk, leaves, pieces of stick, dirt and sand with the cotton in the bales, great injury is done to the fibre, and, apart from the portions rejected as too impure to turn to account, much waste accumulates from this cause, the fibre being so cut and torn as to render it unavailable for spinning purposes.

These are evils the spinner cannot rectify, though there is no reason why mere shortness of staple should cause rejection. Nor can there be any doubt as to the result should the short staple varieties reach England thoroughly purified of all the dirt and filth which at present make up no inconsiderable portion of the contents of each bale, for were this the case and the out-turn certain, the spinner would not be slow in so altering or re-adjusting his machinery as to adapt it to work up the short staple. It is objected that during the many processes the cotton fibre has to undergo while in transit through the spinning machinery, the shortness of the staple of Indian cotton is apt to cause its being blown away. But though this may be an objection to its use in machinery adapted only to the spinning of the longer varieties, there can be no question of the feasibility of adapting machinery to the spinning of fibres of any length. It is not therefore so much a question of length, as of fineness and purity, and as one of the indigenous descriptions is not only very productive, but yields a staple at once long, fine and strong, it at first appears surprising that any other should be cultivated at all, but when we look into the reason our astonishment abates. In the first place except for the manufacture of the finest descriptions of muslin, for which the cotton is peculiarly prepared for the yarn obtained from England, no cotton of a fine description is required by the local consumers. Manchester cotton goods of the finer orders are obtainable in India at a lower figure than they can possibly be produced by the country looms. It is therefore to the coarser kinds of cloth used by the lower orders for every day purposes, either for clothing or the numerous purposes to which coarse and strong cotton yarn and cloth are applied in India, that the staple is employed, and for these purposes the 'Bondee' is used, and for two reasons. The first and most important is that, while the 'Bunsee' cotton requires a peculiar soil to bring it to perfection and produce a large yield, the 'Bondee' may be grown almost in any soil, and between the rows of plants several descriptions of pulse may be sown, whereby with but one ploughing and dressing the Ryot is enabled to grow two crops, and the pulse taking the place of weeds obviates the necessity for weeding; whereas the 'Bunsee' cannot be profitably grown

intermingled with any other crop. The other reason is that the fibre of the 'Bondee' is, though short, exceedingly strong and close, and as it is procurable at a lower rate than the other, from the smaller expense incurred in its cultivation, and as it is equally well if not better adapted for the common coarse purposes to which it is to be applied, it is in general use. Nor must it be forgotten that for making ropes, which are in common use in the cotton districts, it is by far the best adapted.

There is therefore an indigenous cotton plant in India, which with little care might be made to yield a staple in every way suited to Manchester spinners. The staple is quite as fine and long as ordinary Upland cotton, and by attention to the cultivation both its fineness and length might be improved. The one drawback before which all others pale is the inadequate price all Indian cottons command in the home market, when the American varieties are available; and while there is so little security for any maintenance of price, it cannot be expected that so suspicious and timid a race as the natives of India will pay much attention to improvement, when the results of their labor and money is of so very doubtful a nature. Any improvement therefore as well as any marked increase in the cultivation of cotton must depend entirely on British enterprise, for as it has been endeavoured to be shewn, the cultivator himself has no direct interest in its production, inasmuch as he can employ his land far more profitably.

The means, by which all that is requisite to induce both increase of cultivation and improvement in the staples could be ensured, may be shortly stated as being the establishment of British Agencies in localities contiguous to the known cotton fields of India, with appliances for cleaning and packing the cotton on the spot, and improved means of transport, to which must be added the enactment of an equitable law rendering performance of contract by either party compulsory, and punishing promptly and severely all dishonest evasion. Without this latter condition the European would stand no chance of success in any endeavour to promote the object in view, his advances would be taken but the native dealer or agent would alone profit by them; but with such a law to back him he could soon drive his opponents out of the field. The advances he made to the Ryot might be independent of interest, and the evils attending on the usurious practices of the native traders being removed from the cultivator, his crop of cotton would at once become more profitable. Besides, with improved means of transport, and with appliances for cleaning, screwing and baling on the spot, the bulk of the article would be so much

reduced, that the cost of carriage would necessarily be far less heavy than at present, and so leave a margin for profit sufficiently broad to warrant a better price being paid for improvement in the culture of the plant, and in the picking. The cleaning would always be more advantageously done at the factory, under the immediate eye of the agent, for not only would it render certain the cleanliness and purity of the cotton baled, but as in nine cases out of ten the cleanest cotton brought to the factory would have to be again passed through the saw gin, the double risk of injuring the fibre would be avoided, and the first expense saved to the Ryot; and this would tend still further, by enlarging his profits, to induce the payment of additional attention to the preparation and manuring of his land, and to the culture and weeding of the plant, all of which are so essential to abundant yield.

A means for improving the staple would be found in the agent's providing the seed himself; this he might manage, by, in the first instance selecting from the pods those seeds only to which the longest and finest fibres are attached; by sowing them in carefully prepared land adjacent to the factory, he would raise a crop of seed cotton, which being immediately under his own eye could not fail to meet with every attention requisite: from the pods thus raised after selecting the finest seeds for further experiments, he would obtain seed which would be sure to be an improvement on that ordinarily sown by the Ryots, and which he might distribute among them for their next crop. By pursuing this system a few years could not fail to see the indigenous cotton very considerably improved in every respect, nor could the experiment be attended with any expense at all likely even in the first instance to act detrimentally on the profits of the factory.

There are few parts of India where the European can possibly expect to be able to cultivate his fields with his own hands without sooner or later succumbing to the effects of climate. Nor in such localities could he possibly raise cotton. But though the British settler cannot with impunity do outdoor work under a tropical sun, he may turn the grant of land he obtains from the Government to far greater profit to himself and to others than by any bodily exertion on his own part. By offering leases of small farms to native agriculturists at nominal rents under certain provisos he may ensure such crops as he may desire, and by personal superintendence he may secure that care and attention on the part of his tenant to the preparation of the land and to the after culture, which cannot fail to prove a source of profit to both landlord and tenant.

It is in this way that British enterprise in India may be

productive of incalculable good. It is by such means that the waste lands at the disposal of Government, and which are now obtainable on very liberal terms may be turned to good account, not only as rendering productive barren wastes, but as bringing into immediate intercourse the two peoples, where the interests of both, so far from clashing, are similar, and by such intercourse doing more to efface the present careless and slovenly style of agriculture pursued by the native, and substituting for it the careful neatness of the English system, than years of antagonism such as now rages in Bengal between the two races could by any possibility effect. To the introduction into India of a practical class of farmers from England we look for more advantage to the people and more security against revolt than to any other means, and if the present demand for cotton by England, and the pressure put upon the Government, by causing the removal of present and past obstructions to the settlement of Anglo-Saxons in India, be the means of insuring the immigration of the required class, both England and India may have cause to bless the day when from internal commotion the supplies of American cotton were cut off.

With regard to the foreign varieties of cotton, which have been introduced into India with as yet but partial success, there is much to be said as to the causes of failure in so many instances, and, notwithstanding these failures, of the promises of eventual success in satisfactorily acclimatizing one and all of the descriptions found in every part of the world. The known varieties are distinguishable under three different heads:—1st '*Gossypium Barbádense*' under which is classed, Sea Island, Egyptian, New Orleans, Mobile, Alabama, Uplands, Demarara, Berbice, and West Indian,—2nd '*Gossypium Peruvianum*' comprising Peruvian, Pernambuco, Aracali, Ceara, Maranhão, Para, Bahia and Maceio; and 3rd '*Gossypium Indicum*,' under which head are found all the Asiatic varieties, Smyrna, Surats, Madras and Bengal. The three varieties are generally distinguishable by the formation of the leaves. The leaves of the *Gossypium Barbádense* are in most descriptions three lobed with the lobes full and short. The *Gossypium Peruvianum* assimilates much with the former, except that the leaves have generally five lobes. But as all these varieties are considerably affected, by soil and climate, they one and all very materially alter their features in different situations, the short full leaf of the New Orleans variety becoming very considerably lengthened when produced in some parts of India, so much so as to make it resemble in many respects the indigenous plant, while in others, where soil and climate

approximate more nearly those of New Orleans, its distinguishing characteristics are more nearly maintained, it is thus a matter of great difficulty for the Botanist to determine at any time the exact species to which one or other of the numerous descriptions of cotton really belongs.

The properties peculiar to the numerous varieties of cotton classed under each head are various, but each performs its part, and if the processes of weaving are carefully examined it will be found that the staple suited to the warp would not answer for the weft. In spinning also we find that it does not always answer to spin a yarn entirely of one description of cotton. Of course it will very greatly depend on the purposes for which the yarn is required, but as a general rule, several descriptions of cotton are used in the manufacture of one article. Of all foreign cottons Sea Island is the longest in staple and the finest in fibre; next as to both qualities stands Egyptian. Brazilian as to length of staple comes third, but its fibre is the coarsest of all: last we have New Orleans or Uplands, which while being shortest in staple is next to Egyptian in texture. Of the products of India, cotton grown from Sea Island and Egyptian seed stands first. In length of staple it stands next to Sea Island, and in quality of fibre it ranks next to Egyptian. The produce of exotic American cotton ranks just below Brazilian as to length of fibre, but below all the foreign varieties in coarseness. Last of all in every way ranks the indigenous cotton of India. There is no reason why such should be the case, and were proper attention and care paid to the selection of ground, to loosening the earth round the roots of the plant, to weeding, and to the picking of the pods, not only could a better staple be produced, but a more marketable article in every way.

The instances of failure in attempts made in Bengal to introduce varieties of American cotton have been purely the result of ignorance and inattention on the part of those experimentalizing. As an instance of this, we may quote Mr. Patterson Saunders Senior who in his report on the Doab says:—‘A planter at Mynpoo-ree informed me that he had received a supply of New Orleans seed from the Agricultural and Horticultural Society, that he had sown some hundreds of beegahs, but that none of it had germinated; he said this had greatly discouraged him and many Native Zemindars, who were watching the experiment, and they had all come to the conclusion that the soil and climate were not suited to the kind of seed. On enquiring how he had sown it, I elicited from him that, by the advice of a Native, he had steeped the seed in hot water. He admitted that he had not

‘superintended the sowing of it himself and could not say how ‘hot the water was.’ This is a painful example of how little heed even Europeans will pay to the cultivation of a crop from which they anticipate no adequate return for the trouble bestowed and expense incurred on it, nor can it be wondered at that natives, always suspicious of any innovation, should without any enquiry adopt the conclusion, that failure proved the unfitness of the seed to the locality. That both the climate and soil of the Doab are favourable to the growth of both Egyptian and New Orleans cotton the following extract from the same paper evinces. ‘At Futtighur I visited a small plantation of Mr. F. C. Bryant, who ‘had been supplied by the same society with the very same seed. ‘The whole of it had germinated well, but here again want of ‘knowledge had led Mr. Bryant to the conclusion that soil ‘and climate were not suited to the plant, as it was sickly, ‘yellow and stunted. The seed was sown with the first rains in ‘June, and to the day I saw the plantation (the 5th August) ‘the soil had never been disturbed by hoe or plough. The ‘soil of the field had been beaten hard by the rain and baked by ‘the sun. The plants were strangled by the hardness of the ‘earth around them, and maintained a sickly and feeble existence.’ Here we have proof indisputable of suitableness of soil, for the seed germinated well, and had Mr. Bryant but paid the same attention to his cotton crop that he would have done to any other, the plant would not have been choked, and the growth stunted by its having to force its way through hard impervious ground. As Mr. Saunders remarks ‘It is melancholy to think that ‘soil and climate should be condemned where want of skill in ‘culture is the sole cause of failure.’ As the reverse of both of these pictures we have lately seen a sample of cotton grown in the Sunderbunds, which for length and fineness of staple, color and texture is equal to any we have ever seen produced in America. It is of the purest white and soft almost as the fleece of the *Gossypium Arboreum*. This we understand had been raised from Sea Island seed, and if so it proves that the soil this description delights in on the coasts of South Carolina and of Georgia is not essential to its productiveness, but that it can be translated to other lands without in any way lessening its value. The soil of the Sea Islands is an accumulation of oyster, and other shells mingled with bones and pottery; these having become intimately mixed with the sandy soil of the Island and with decayed vegetable matter, present a peculiar loam of a light and fertile nature. Dr. Forbes Royle from whose work we cull the foregoing, further adds that ‘Mr.

‘Piddington having received some of this Sea Island cotton soil, describes it whendry as appearing like a mixture of fine dark-gray sand, and charcoal dust, with fragments of shells, wood, both dry and charred, twigs, leaves, and even the shells of cotton seeds. Upon sifting nine ounces of the soil eight ounces passed through muslin as fine sand mixed with dark charcoal-looking dust. The remaining ounce was coarse sand with fragments of shells and vegetable rubbish.’ From this description of the nature and component parts of the Sea Island soil, the cotton grower in India can be at no loss to determine the propriety or otherwise of adopting the seed of those Islands as the exotic suited best to the land at his disposal. In the Sunderbunds though the soil is in some measure saline, it can scarcely be more so than that of the Sea Islands, which in different localities contains a large percentage of saline matter, muriate of lime and soda, the other deposits must in some measure resemble the Sea Island soil with the addition of the rich alluvial loam washed down by the Ganges. It is therefore not improbable that further trial may shew the Sunderbunds to be capable of producing even a better staple from Sea Island cotton seed than do the Islands themselves. In Dharwar, the cotton raised from Sea Island seed reached a mean length of 1.65 inches, and from New Orleans seed 1.50 inches: these measurements were made in Liverpool in June 1860 and were compared with the cotton received direct from the two localities. The Sea Island cotton was found to measure, 1.61, and New Orleans 1.02 inches, thus the produce of Sea Island and New Orleans seed grown in Dharwar surpassed in length of fibre the produce of both those places, but the Dharwar cotton had this drawback, that the staple was not so fine as in the American samples. It proves however what may be effected by attention to the peculiarities of the plant and to its requirements in respect of soil and climate, and what good results may be arrived at by the due application of skill and science.

Had similar attention been paid to the subject by the Doab Planters, very different results from those met with by Mr. Saunders would have been the consequence. If India is to take the place of America in producing for England the several varieties of cotton required for her manufactories, it will be by observing the peculiar properties and requirements of exotic plants. We find even in India that the black alluvial deposit, commonly known as black cotton soil, is not adapted to the cultivation of every kind of indigenous cotton, and the man who tries to raise the plant on soil which is not suited to it, will surely experience failure and disappointment. If this be the case as it

undoubtedly is with reference to indigenous cotton, how much more so must it be in respect of foreign varieties, and how much greater is the necessity for learning all the peculiar requirements of the species before its adoption is decided on. In Georgia, where what is called Upland cotton is produced, 'from the sea coast to the interior, for a considerable breadth, the country is level and the soil a sandy loam. Beyond these plains stretch the hilly undulating tracts, which have a deep black loamy soil.' This soil is in many respects similar to the 'Cotton soil' of India, but it is not that on which the best Uplands cotton is produced. It is 'a light, fawn colored sandy soil, with coarse particles of silex, of felspar, and of shells, some peaty, much-divided vegetable matter, but without any saline matter.' Soil of this description or of analogous properties exists in the Southern Mahratta country, the Concan, Belgaum, Dharwar, and about Sedashagurh, and the best cotton grown from Upland seed, known as Dharwar cotton, is produced on soil of this nature. This is a subject of peculiar value, and points out clearly the cause of the success which has attended on the experiments made in the Southern Mahratta country to introduce into India the several varieties of American cotton. The study of the nature not only of the soil but of the plant and climate moreover is necessary to success, and absolutely indispensable to all those who are about to take an active part either in the production of cotton in India or in the improvement of existing varieties and the introduction of foreign kinds, for nothing but disappointment can result if the opportunity offered of studying these details is neglected. We find that in Georgia there are other soils all of which produce abundant crops, one 'of a deep chocolate color, and yielding from 1000 to 1500 lbs of seed cotton to the acre,' another 'situated in a limestone region, which invariably grows a good product,' the structure of all is light, porous and friable, of such a nature as to possess considerable retentive power for water, and yet from its openness, to allow of a sufficient degree of drainage. The Georgian soils 'consist mostly of sand and all contain alumina, oxide of iron and of manganese, but hardly any lime. The organic matters consist either of decayed portions of plants &c. or very finely divided soluble matter, which in the soils vary from 4 to 8 per cent and in the subsoils from 1 and  $1\frac{1}{2}$  to 4 per cent. The soils also contain traces of saline matter.'

The short stapled cottons of America thrive best near the sea, in alluvial soils slightly impregnated with salt, but the soil in India found to produce the best crops from American seed is a red soil produced by the disintegration of granitic rocks and

is described as a coarse yellowish red soil intermixed with small fragments of kunkur, silex, felspar, and aluminous earth. The chief distinctions between the soils, of America, Mauritius, and Singapore and of India, are that the former contain a considerable percentage of vegetable matter and some part of it easily soluble in cold water, while in the latter very little vegetable matter is contained and that wholly insoluble in water: of Indian soils the best contain a far larger proportion of carbonate of lime. For the production of cotton the presence of vegetable matter in the soil is indispensable, nor can lime be dispensed with; though in Bengal, cotton valued at 9d and 11d per lb has been grown as an experiment in soil containing exceedingly minute portions of lime and carbonaceous matter.

It is at all times necessary in deciding on the nature of the soils to be employed for the production of cotton to consider their suitability in connection with climate, as regards not only temperature but humidity. Insufficiency and overabundance of moisture are both inimical to the luxuriant growth of cotton, but of the two the first is by far the worst. Cotton may and in some instances does live through a flood, and yield an abundant crop, but drought excepting in some peculiar localities and species destroys it outright; while therefore due care is taken that the soil shall be capable of retaining a great amount of moisture, it is as well in such soils as are liable to become too moist, by judicious drainage to guard against excessive damp at the roots of the plant. These are subjects to which the native agriculturist pays not the slightest attention, and it is chiefly from such causes that we find the yield of an acre of indigenous cotton but seldom exceeding 500lbs, the general average being half that amount, while the return from the same quantity of land in America is seldom if ever below 700lbs, and reaches to double that quantity in some favored situations and peculiarly productive soils. It is to the British settler and to those who purpose making the production of cotton their pursuit, that India must look for assistance in raising the present faulty system of cultivation to a level with that pursued in America and those countries where the better staples, and larger crops are produced. Every Englishman entering on agricultural pursuits in India should not only make himself thoroughly acquainted with the natural properties and component parts of the various soils he is about to work, but should learn how to turn them to the utmost profit by sowing them with those crops only for which they are most fitted. By such means many of the drawbacks to agriculture in India may be removed and difficulties, hitherto considered insurmountable, overcome. In

every grant of waste land obtained from Government a percentage of unproductive land will be given without payment being demanded for it ; to the casual observer land so described appears to be utterly useless and worthless, but the scientific farmer or geologist will hardly fail to find some redeeming qualities hidden under a forbidding exterior, and in many cases he will turn to profitable account what others would regard as an incumbrance and eyesore to an otherwise flourishing estate. There are many soils in India sown year by year with crops they are not suited to produce, poor crops must be the result, and land obtains a bad name simply because its distinctive features are not studied or its real powers of production known ; it is for the European to set this right, and in contracting with the native cultivator he must himself select land suited to the crops he requires and not run the risk of failure by leaving to the decision of the native considerations of so much moment, considerations on which depends success or failure.

Before closing this article it may be useful to take a glance at the system pursued in the cultivation of cotton in America, with the view of contrasting it with the method in vogue in India.

‘ Mr. Spalding (the great authority on the culture of cotton) considers that a rotation of crops is essential, or rather that an intermediate crop of grain should be reaped, and all root crops be avoided.’

‘ For the cultivation of cotton the ground is well ploughed and cast into ridges, which are about 10 inches in height, but vary in being from 5 to 6 or 7 feet apart according to the richness of the soil or the kind of cotton to be cultivated. In poorer soils the ridges are narrower, so that the plants which do not grow so large may yet be able to cover the ground. The ridges allow superfluous moisture to be carried off by the water furrow, which in low situations is made into a trench. The soil is allowed to settle for a few days before sowing, as the young plants take root more vigorously than when they spring up in freshly ploughed and loose earth. Sometimes the ground is manured by running a deep furrow early in the spring between the old rows of cotton stalks, which are beaten down into it by women and children, who follow the ploughman ; or well rotted cotton seed is added as manure, and well covered up by forming a slight ridge over it. When the ground is quite prepared, a one hole drill makes a slight furrow, from  $1\frac{1}{2}$  to 2 inches deep, along the centre of the ridge. The sower follows and drops in the seeds pretty thickly. These are immediately covered by a light harrow which also smooths the

‘ridge. Sometimes five or six seeds are dropped into holes  
‘which are made at intervals of about 15 inches on the top  
‘of the ridge. In favorable weather the plants make their  
‘appearance in five or six days, and are thinned out as soon as  
‘they put forth the third or fourth leaf. This operation is per-  
‘formed by scraping out with the hoe all the superfluous plants  
‘and weeds, leaving three or four together, with spaces of 12 or  
‘14 inches between them. When the plants are sufficiently  
‘established, they are reduced to a single one, and care is taken to  
‘remove every particle of grass or weed. A light furrow is  
‘then run with a one horse plough within 5 or 6 inches of the  
‘plants, turning the earth inwards towards the roots, and even  
‘drawing it around them with the hoe in order to supply the  
‘place of that previously removed by scraping. Hoeing and  
‘ploughing are frequently repeated, so as to keep the ground free  
‘from weeds, and this is considered essential towards obtaining  
‘a good crop. The above processes besides loosening the soil and  
‘keeping it clean, must assist in drying it, at the same time that  
‘they prevent much lateral extension of the roots.

‘Lopping or pinching off an inch or two of the top of the  
‘plant is not always necessary, but is useful when there is a tenden-  
‘cy to the production of wood and leaves to the detriment of flow-  
‘ers and buds. When the operations have been completed the  
‘plant is two or three months old and from two to three feet  
‘high; but at other times it attains a height of four or five feet.’

Let us now turn to Mr. Sillar’s description of the process pur-  
sued in the cultivation of cotton by the native of India, and having  
done so there will be no longer room for question as to the why  
and wherefore of the yield of an acre of Indian cotton being so  
very far below that of a similar area in America.

‘In March the old stocks are pulled up and the land ploughed,  
‘10 bullocks pull one plough, sometimes 8, never less, sometimes  
‘old rotten cow-dung is put in the land as manure, generally  
‘not so. By the end of May the ground is harrowed by a  
‘harrow and a pair of bullocks. After rain has fallen once or  
‘twice (about the last week in June) the seed is put in either by  
‘a machine with three teeth, which scratches the ground and  
‘lets the seed fall into the furrow, or else sown broad-cast, the  
‘seed being mixed with earth to keep the grains separate; it is  
‘weeded about four times.’

The seed is not soaked in water before sowing. The tops  
of the plants are not cut off; when it blooms the branches are  
not thinned. The goats are turned into the cotton fields, to  
eat the tops off.

There are doubtless in a dry climate like India, good reasons for not adopting in its entirety the system pursued in America, the ridges for instance could not fail to be highly injurious, as being raised and forming a comparatively thin stratum of earth, they would be heated and even baked by the powerful sun of India, and the tender radicles of the plant proportionately injured. The moisture in the earth would by this means be entirely evaporated, and any rain falling would be carried off too rapidly by the water furrow on each side of the row of plants. But with some few modifications the American system might be introduced with very good effect, and to much advantage in India where it may literally be said there is no system whatever, the seed after having been once put in the ground being left to germinate and the plant being allowed to grow very much as nature dictates, without any aid from art.

It has been said by a writer in one of the leading Calcutta Journals, in a series of admirable articles on the cotton question, that if Manchester will adapt her machinery to work up the short and coarse stapled cotton of India she may by substituting a machine for a hand loom cloth, so undersell the hand loom workers of India, as to obtain every pod of cotton grown throughout India, and by such means effectually stave off the misery with which shortness of supply threatens her working classes. At the same time though undoubtedly the measure proposed would prevent the recurrence of the present evil from the internecine struggle in America, the fact must not be lost sight of, nor is it by the writer in question, that India to hold her own as a cotton producing country must, by the improvement of the indigenous plant, and the introduction and acclimatization of foreign species, for her part raise a staple in every way fitted for the manufacture of the finest cotton fabrics which hand or machinery can turn out. It will not do for India in England's need to oblige her to take what it is her pleasure to produce, but she must use every endeavour so to advance her cotton cultivation as to be able to send her the staples most urgently required. If India sets vigourously to work, by the production of every variety of fibre England requires, to retain her custom, she will succeed; but if she does not, the efforts of the few who are now moving in the matter will be lost and we shall in a year or two at furthest see the Indian cotton trade, now reviving, sink again into insignificance as it did when slave grown cotton was introduced from the Southern States of America.

To prevent this, and to guard against any further reliance being placed by England on an uncertain and precarious supply,

such as for the future that from America must be, it is incumbent not alone on India but on England herself to encourage in every legitimate way that attention to cotton cultivation in India which is now displaying itself.

We have already pointed out how the object in view may be attained, and we will now conclude this article by quoting Mr. Patterson Saunders on the subject. 'For a trade in cotton such as England would consume, European superintendents and European capitalists are indispensable. There is no doubt that with proper cultivation the native cotton would be largely improved in color, fibre and staple, and the exotic varieties such as Egyptian and New Orleans would grow well. The European capitalist is required to advance funds to the grower, to teach him how to cultivate and pick his cotton, to erect factories and import screws for the purpose of cleaning, screwing and packing the cotton. I am convinced that in these densely populated districts Europeans can never cultivate cotton on a large scale. Every man, woman and child in the country would steal it, and as the picking cotton occupies nearly two months, the European growers would not house one third of their crop. All agricultural produce that the natives can eat or use, such as grain or cotton can never be grown on a large scale by Europeans, but they may with advantage, have small plantations attached to their Factories, to show the people how to cultivate, to show the greater profits of good cultivation, and to be enabled also to distribute good seed among them.'

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- ART. V.—1. *Egypt's Place in Universal History.* By Bunsen, 4 vols. 8vo. London: Longman & Co.
2. *Horæ Egyptiacæ, or the Chronology of Ancient Egypt.* By Reginald S. Poole, 1 vol. 8vo. London: Murray, 1857.
3. *Otia Egyptiaca.* By Gleddon, 1 vol. 8vo. London: Madden, 1849.
4. *The Ancient Egyptians.* By Sir J. G. Wilkinson.
5. *Egyptian Hieroglyphics.* By S. Birch 1 vol. 12mo. London: Bradbury & Evans, 1857.
6. *Israel in Egypt.* 1 vol. 18mo. London: Seeleys, 1854.
7. *Cory's Ancient Fragments.* 1 vol. 8vo. London: Pickering, 1852.

IT is our wish to devote more than one article to an elaborate and conscientious examination of Bunsen's best and greatest work—*Egypt's Place in Universal History*. From many of his conclusions we shall be compelled to withhold our assent: but as a monument of far reaching research, of matchless ingenuity, of scholarship profound and almost universal, and of masterly dealing with the history of ages so remote that their memory seemed to have utterly perished, his work is, in its own department, unequalled and alone. It has been the crowning glory of his literary life: but it has also raised up much obloquy against him, and many enemies. We had the privilege of hearing from his own lips opinions on certain portions of Scripture history and chronology differing from those generally held, and of hearing at the same time his admiration of the Bible, and full conviction that it was the word of God; and we believe him to have lived and died a true follower of Jesus. This does not affect, it is true, the facts and questions discussed in his work, which are to be determined on other grounds. By their own merits they must stand or fall. But this brief expression of respect for a great and good man, an honour to his age and to his country, will tend to show that we come to the consideration of his views with no prejudice against the writer, and no belief that he was either an infidel, or an enemy to the Bible.

The first step in our inquiry will be to lay before our readers a popular bird's eye view of Egypt, its physical geography, its monuments, temples and tombs, its social life, chronology and

history about 4000 years ago. The manner in which this knowledge has been acquired, the fulness accuracy and minuteness of its details, the firm historical basis of the successive dynasties, the comparative ease with which the hieroglyphics are now deciphered and interpreted, are in themselves most curious and interesting. They have all the fascination and freshness of strange and new discoveries. They are the resuscitation of a past that seemed long ago buried and forgotten.

To know, not only what the evidence is, but also how it has been obtained, and to set it, so to speak, before our own eyes, will greatly help us to judge of its value. Such an introductory sketch is absolutely necessary, ere we can realize, as sober facts, the history of a people that lived so long ago. In 4000 or 5000 years such great changes take place and time deals so roughly with man and the work of man's hands, that we can scarcely imagine beforehand how any human memory or memorial can survive so long. The earth itself changes its aspect; seas dry up; islands rise from the depths of the ocean, are gradually covered with vegetation, and become at length the abodes of man. In 4000 years nations die out, and newer and stronger races come into existence: and, in a far shorter period man's proudest works, his citadels, cities, temples, palaces, and tombs, crumble into dust, turn to heaps of ruins; they are sometimes however buried in the earth, as a mammoth preserved in polar snows, to come up again after hundreds or thousands of years, and startle us, like a visitor from other times, or another world. It is doubtful if there be in England any building, now habitable or entire, that can be traced back for 1800 years; and it is certain that no trace of authentic English history goes back so far as 2000 years. Our first appearance on the world's stage was when Julius Cæsar crossed the Straits of Dover about 50 years before Christ, and fought with our forefathers, or (to speak more correctly) not with our forefathers, but the forefathers of the Welsh, and perhaps of the Highlanders. He found the people of England painted savages, but warlike and brave enough. That was 1900 years ago. Rome who then ruled the world, lorded it over France, and looked upon the British of that day, much as we look upon the savages in the Andaman islands. Seven hundred years before that again, Rome itself was not founded. If we wish to know the time of the Norman Conquest, or the battle of Cressy, or Agincourt we obtain information from books and manuscripts. But printing was only discovered 400 years ago; there is no known manuscript 1600 years old except of course the rolls found at Herculaneum and the papyri of Egypt, which from various causes

are all but unintelligible, and our era goes back but 1861 years. The Romans, the Greeks and the Babylonians had each an era of their own; and all three began about the same time—all less than 800 years before Christ. There is no earlier historical era—that is, for the last 2700 years, we can (in most cases) tell the particular year in which any great event happened; but before that all is confusion and guessing, and there is no accurate history, in any profane writer, nothing that we can fully rely on.

Two thousand seven hundred years ago then is a very important date, as the beginning of true and trustworthy profane history. It coincides very nearly with the reign of Hezekiah, king of Judah. But Egypt was a powerful and civilized kingdom, and had built some of its mightiest monuments at least 1500 probably 2000 years before Hezekiah was born. For all that long, dark, weary period, Europe had no history; and with the exception of a few Grecian legends like our Robin Hood, or King Arthur and his knights of the round table, all we know is, that hordes of savages from the East roamed through its vast forests, or spread over its wide plains, here and there gathering into some show of rude civilization, but on the whole, wild, fierce, unlettered. Many a death struggle for existence, many a bloody fight, was lost and won; many a barbaric king led his hosts to conquest; many a famous warrior, whose name was once a name of terror, sleeps nameless and forgotten beneath his mound. Not one single deed, not one single name is preserved to us; and we know as little of what was doing in our own Europe for these 2000 years, as we know of what is now doing in the undiscovered regions of Central Africa. How shall we cross this vast gulf, dark, sunless, bottomless. How can the mind wing its flight 4000 years back, and transport us to the halls and palaces of the Pharaohs, read to us their daily history, and set them before us, not by description and story, but face to face, in such a way that the most hard of belief will be as fully persuaded, as if he had lived among those old Egyptians, and seen them with his own eyes? With the help of the Bible, we can find our way across this great gulf. God has suffered all other history to sink into oblivion. He has preserved alone the history of the only people on earth that worshipped the living and the true God. Jewish history is complete from Hezekiah to Abraham, that great and good and holy man, whom Mussulman, and Jew and Christian alike venerate. We cannot tell exactly how many years elapsed between Abraham and Hezekiah. It could not have been less than 1400; that is, it is now fully 4000 years

since Abraham went down into Egypt, and found a Pharaoh on the throne.

Many of us have sailed on the mysterious Nile, passed through modern Cairo, close to the spot, where Memphis, the ancient and first capital of Egypt once stood, and seen those grey old pyramids, rising like mountains above the desert. Is it not suggestive of their vast, their wondrous age to know that in that self same place they stood in Abraham's days, and that the eyes of Sarah and of Abraham, must have looked up to them with an awe and wonder like our own? Many a billow of war and change has surged and broken at their feet; all the dynasties of the Pharaohs, and the shepherd Kings, Abraham, Joseph and Moses, the mad Cambyses and his Persians, the great Alexander and his Macedonians, the first Caesars and their Romans, Herod the Great, St. Louis and his Franks, Saladin and his Saracenic hosts, Napoleon the First and our own Abercrombie and Nelson, the foremost men in all the world have looked upon them, and died, and crumbled into dust: but there they stand in silent, calm, all but everlasting, grandeur, and there they may stand thousands of years hence in a future parted as far from us, as we are from Abraham.

Soon after Egypt was conquered by Alexander the Great, about 300 years before Christ, in the reign of Ptolemy, the first Greek King of Egypt, there lived an Egyptian priest, named *Manetho*. From lists of the Kings, kept in the temples, and seen also by Herodotus (that most delightful, curious, and interesting of all travellers and historians) about 500 years before, and from the traditions and records, oral and written, preserved by the priests, this Manetho wrote a long and elaborate history of Egypt, from the foundation of Memphis by Menes the first king, to the conquest of Alexander the Great. This history is lost; and to judge from the fragments of it that have come down to us, the world has probably not lost much by its destruction; for they are mostly silly and absurd fables. But though the history is lost, the lists remain, having been copied by two of the early Christian writers. That is, we have the names of nearly all the kings from Menes to Alexander, and in most cases the lengths of their reigns, handed down to us by this Egyptian priest, Manetho.

But may it not be that his catalogue of kings is as visionary, as the portraits of the Scottish kings in Holyrood palace? We may feel assured that it is not, because the very names, that he gives, are to be seen to this day on the royal tombs and sepulchres: and then as to his dates, you find in the Bible Shishak,

king of Egypt, conquering Rehoboam king of Judah. Hezekiah contemporary with Tirhaka (Taracho) king of Ethiopia; king Josiah slain by Pharaoh Necho, B.C. 610; and Pharaoh Hophra in the times of Zedekiah and Nebuchadnezzar. Counting the years in the Bible from Rehoboam to Hezekiah Josiah, and Zedekiah; and then counting the years in Manetho from Shishak to Tarchon, Pharaoh Necho, and Pharaoh Apries we shall find them agree all but exactly.

Manetho says as well as Herodotus that the largest pyramid was built by a King called Cheops, or Chufu; and he is much farther back from Shishak in Manetho's lists than Abraham is from Rehoboam in our Scriptures. If then King Chufu built this pyramid, it must be older than Abraham. But of this there is really no doubt whatever. Not many years ago Col. Howard Vyse opened and measured nearly all the pyramids; and in a small recess built above the principal room in the largest, opened perhaps for the first time since the days of the Pharaohs, the name of Chufu, was found repeatedly on the stones, as a quarry mark!

It is certain that Shishak went up to Jerusalem, and took it in the time of Rehoboam; and on the monuments of Egypt we have a picture of a King, brought bound before this very Shishak, with this inscription over his head—'The King of the Jews.' It is certain also that Rehoboam lived 1,000 years before Christ; and therefore very little less than 3,000 years ago. Manetho gives the names of many Kings, who lived before Shishak. One built a temple, another a palace, or a pyramid, or a wonder of the world, like the new re-discovered Labyrinth, with remains of its 3,000 chambers in the Feiyoom, or erected an obelisk of one huge stone. One reigned 50 years; another, 20; another, 12. One conquered Syria, Palestine, and Ethiopia; another was driven from his kingdom.

All these particulars, and many others (very brief all of them) relating to hundreds of Kings before Shishak, are to be found in the lists of Manetho. Enter the pyramid, go to the temples and palaces of Thebes, read the inscriptions still on the obelisks, on the walls, in the tombs, in the quarries at Sinai, down as far as Nubia, up beyond Tyre and Sidon:—each has on it a name found in Manetho; and when these Kings tell us of work done, or war finished in a certain year of their reign, that number in no one instance contradicts the length of reigns allowed to them by Manetho. Two distinct genealogical tables have been found, on the whole agreeing with Manetho, and the Monuments, and going back for certainly 1500 years before Shishak. Such inscriptions pervade all Egypt, are sown broad-cast over the land;

and as they were before Shishak, himself flourishing nearly 3000 years ago, even this short sketch will suffice to convince the reader, that he is fairly landed among Kings and buildings, that are fully 4000 years from our days.

Before proceeding further it may be well to explain what these pyramids really are. It is only very lately that they have been thoroughly explored, and their true use and meaning discovered. Many thought, they were built before the deluge. Others, that like the tower of Babel, they were meant to flee to, if God sent another flood. Some imagined them to be the granaries, wherein Joseph stored the fruits of the seven years of plenty. Others, that they were treasure houses built by the Israelites for Rameses the Great. It so happens that the largest pyramid contains only two small sized rooms, and would scarcely have served as a barn for an ordinary farmer, far less as vast granaries for all the corn of Egypt; while the idea of keeping treasure, in a place hermetically sealed, and so strongly and effectually shut up, as to have defied the curiosity and the avarice of 40 centuries, is only absurd. Astronomers again would have them to be observatories, because their sides face the cardinal points, and the air passage points nearly to the pole; while an ingenious Frenchman, no longer ago than 1845, insists that they were intended beyond all doubt to check the encroachments of the sands of the desert!

The Arabs and Turks do not trouble themselves with such speculations. They tell you gravely and with full belief, that they were built either by the giants, or by the *Jins*! What is a Pyramid then after all? It is just what the old Egyptians always said, it was; just what Herodotus told us 2600 years ago—it is nothing more or less than a huge tomb. Let us take the largest pyramid as an example; for they are all nearly alike. A site was chosen for it, on the top of a range of limestone rock, that rises about one hundred feet above the valley of the Nile. In this rock a shaft was sunk to a considerable depth, and where it ended a room or chamber was cut out in the rock, about the size of one of our ordinary rooms;—30 or 40 feet long, from 16 to 20 wide, and from 11 to 14 feet high. This was for the coffin usually of granite highly polished, or of some other valuable stone, with the king's body inside. In rare cases a second chamber, and in one a third was formed far above this in the huge stone or brick superstructure, which was built above the rock. This too contained a stone or marble coffin, sometimes highly ornamented, for the body of the king or queen. Two passages lead to these at a gentle incline; the one enters from various heights (generally

about 50 feet) from the ground; the other is underground altogether. After the coffin was once pushed in through these long passages of the most exquisite finish and workmanship, so that even now you cannot insert the blade of a penknife between the joinings of the granite blocks, the passages were stopped by close fitting granite portcullises, the entrances filled up with huge blocks, and every precaution taken to conceal both from prying eyes. Two small air passages led up to the outer air, for the convenience of the workmen. There is nothing else in the pyramid, only a small room, a coffin and a dead body: all the rest, with the exception of the passages generally about 3 feet wide, and 4 or 5 high, is solid brick or stone. In every pyramid, either the coffin and the body, or the empty coffin, or fragments of it, or the excavation in which it stood, is found in the central room: so that not a doubt remains that a pyramid is simply a large tomb formed by four inclined planes meeting in a point. But what a tomb! The great pyramid alone contains 90,000,000 cubic feet. Each side of the base was  $767\frac{1}{2}$  feet, and the summit was 479.64 feet high. The pyramid was built, as we see it now, in successive stages, each smaller than the one below, so that it was ascended by steps, about 3 feet high and 2 feet wide, to the top.\* How with their rude machinery, they raised such huge

\* The Great Pyramid is according to Perring's measurements in English feet:—

Base .....	767.424	} angle of side with base $51^{\circ} 20' 25''$
Height .....	479.64	
Slant Height	614.23	

Entrance 51.39 ft. from ground, 23 ft. 8 in. East of centre on the North side. Length of passage from entrance to 1st room 342.6, Height 3.915. Width 3.426. Incline  $26^{\circ} 33' 54''$ . There are 2 rooms above and 1 below the base. The lower chamber 90 feet 8 inches *below* the base is 46 feet long East and West, 27 feet 1 inch wide, and 11 feet 6 inches high. The horizontal chamber running out of it is 27 feet long, 5 feet 9 inches wide, and 3 feet high, leading to the passage opposite the entrance. Another narrow horizontal passage 53 feet long, about  $2\frac{1}{2}$  wide, and  $2\frac{1}{2}$  high, leads to nothing, and was probably unfinished. In going to the upper rooms, you first descend till you reach 2 branches one leading down to the room below; the other ascending for 156 feet, till it comes to the great gallery: here it branches again horizontally for 110 feet to the Queen's chamber  $18\frac{3}{4} \times 17$  and 15 high, with the roof sloping:—the other branch continues to ascend, and opens into a long gallery or hall, 150 feet 10 inches long, 5 feet 2 inches wide, 28 feet high. From the great gallery a horizontal passage 22 feet long, leads to the main chamber, with an opening and a large granite portcullis in the middle  $12\frac{1}{2}$  feet high. The main chamber, just in the centre, 139 feet above the rock, and 320 below the apex, is  $34\frac{1}{4}$  feet from E to W, 17 feet 1 inch wide, 19 feet 1 inch high. Nine enormous blocks of granite each about 20 feet long form its ceiling. The air passages, of an average diameter of 8 or 9 inches, are 233 feet long. Four recesses above only serve to lessen the pressure on the roof. This pyramid is supposed to be the tomb of 2 kings.

blocks of stone 480 feet from the ground we will not now stop to describe: but when all was done, the workmen began at the top, filled up all the steps with smaller stones and rubble, cut off the projecting edges, and made it all one smooth inclined plane from the top to the bottom. Then the work was complete: and the little shrivelled mummy lay in royal state with 90 millions of cubic feet of stone over him, built at an enormous cost of money and life, by many thousands of his oppressed subjects,—a work stretching perhaps over 30 or 40 years. Herodotus indeed tells us, that in quarrying and shaping the stones in the Arabian mountains, conveying them to the Nile, ferrying them across, dragging them up the limestone rock on which they were built, making the excavations, and finally building the pyramid, about 400,000 men were employed; gangs of 100,000 labourers succeeding each other every three months: and this went on for 30 years. Thank God, this mad senseless folly was confined to the pyramid kings alone. Egypt, servile as it was, revolted against such monstrous and useless selfishness and extravagance; and after the 12th dynasty, we hear no more of Pyramids. There is a kind of comfort in the thought, that all this cruel and merciless labour and expense to preserve a dead body from violence, decay and insult, proved to have been in vain. The pyramids were opened, the coffins rifled or dashed to pieces; and squalid filthy Arabs and Egyptian peasants wrangled over, and tore to pieces the would-be divine carcase of the grandest of the pyramid kings.

The same madness of expenditure for some colossal folly seems to cleave, like a doom, to the land. She built a mountain of stone to be the grave of a solitary tyrant, she raised temples grander and more majestic for an idol with the head of a jackal, or a cat; and we may yet live to see more money thrown into the sand and the sea to dig an impracticable and unusable canal, than would have built a pyramid. Certainly in the strange history of human folly, there is no wilder freak than this lavishing of the wealth, the ingenuity and life-blood of a great enlightened nation to build a huge tomb for a man, whom they often hated with all their hearts; and yet this madness lasted for more than 1,000 years. Let us not forget however that this great pyramid—this huge tomb of Cheops,—which has witnessed the roll of so many centuries, which precedes or is coeval, with the historical human race, stupendous though it be in folly when one thinks of the shrivelled mummy which it entombed, is, when fairly estimated as a great architectural achievement, certainly the most successful, and the most lasting of all that has ever been done by mortal hands.

But it is time to pass from the pyramids to the people that built them. What can we know of them? There is no history : for Manetho gives little more than a mere roll of names, and history if we had it, tells but little of the social and domestic life of a people. An intelligent Japanese, by a visit to Madame Tussaud's Exhibition, and a diligent study of the Illustrated News, would get a more vivid and real idea of our celebrated men and women, our dress, our houses, our sports, our inventions and discoveries, our fashions, manners and customs, than he could gather by industrious reading even from the brilliant and picturesque pages of Lord Macaulay. Would it not be interesting in the extreme, if we could get such a glimpse into Egyptian life and manners thousands of years ago? Would it not be a thing unheard of, almost miraculous, all but impossible? and yet in sober truth and reality, we can do as much as this, perhaps more. We have coloured pictures in profusion drawn by the hands of these Egyptians, who died 4,000 years ago, representing their dress, feasts, processions, amusements, chariots, fights, cooking, sowing, weaving, boat-building, just such things in short as are pictured in the Illustrated News, as fresh as if they had been done yesterday. Besides we have the very clothes they wore, their jewels, earrings, bracelets, their vases and pottery, their wooden vessels, nay the very paper on which they wrote, with the letters and words still legible, in perfect and beautiful preservation. Even seeds and vegetable productions survive, with the latent life still in them : grains of corn found in tombs of the time of the Pharohs not many years ago were planted in England, and produced excellent and nutritious wheat. It is known to agriculturists, as the '*mummy wheat*,' and (more even than this) instead of wax-work figures or marble statues, we have the very men and women, who lived and walked about in Thebes and Memphis more than 3,000 years ago, by hundreds of thousands, with their bodies still in many cases so wondrously preserved, that their features are some times distinct, and might still be recognized by friend or relative, if such were living. We believe that the mummy of Jacob is still to be found in the vaults under the mosque of Hebron ; and, even supposing in that more unfavourable climate, that the body of the patriarch may have crumbled into dust, if the Mahometan fanatics allowed us to enter the vaults, we should find there his coffin certainly, and on it perhaps the name of the king, under whom Joseph served, and thus solve one of the knottiest problems of history. This was also the belief of Bunsen. It is startling to touch the hand, and look into the face, through which living blood circled thousands

of years ago: and, if the dry and dusky lips could speak, or if the withered hands could write down the man's thoughts we might come to know like Moses of old 'all the wisdom of the Egyptians.'

Now as if to fulfil our wish, the pictures, the tombs, the walls of the temples, the palace halls, the obelisks and statues are covered with strange characters, evidently inscriptions, but with men, birds, animals, weapons, houses, etc., instead of letters—literally, a pictorial alphabet. Here then was the writing on the wall: a key not to the future indeed but to the past of Egypt: but the key was lost, and there was no interpreter. For the last eighteen centuries, the hieroglyphics baffled every effort to discover their meaning, and were in every sense of the expression, 'an unknown tongue.' Even if discovered, who was there to understand it, who was likely to be versed in language of the old Pharaohs? It is most interesting to know how at last, and quite lately, we have succeeded in reading and understanding these mysterious characters. For a long time it was the prevailing opinion that the hieroglyphical characters, being all more or less pictures, represented words, or ideas; and so perhaps they did at first. As if for instance, as in children's puzzles, you were to make first a picture of an eye, then of a saw, and last of all, of a yew tree, and read it aloud 'I saw you.' Some people thought that this was laterally the way to read the hieroglyphics. It was not so: but it turns out to be true that the hieroglyphics had a connection with the objects they represented. We owe the discovery of the art of reading these hieroglyphics, the sacred writing of the Egyptians, chiefly to the ingenuity of Champolion, a celebrated Frenchman. In 1798, a black granite stone was found at Rosetta with an inscription in Greek, hieroglyphic, and the demotic, or current characters of the country. Afterwards a small obelisk was brought by Mr. Banks from the extreme south of Egypt with an inscription in Greek and also in hieroglyphics. The Greek was found to be, in the first, a decree relating to one of the Ptolemies; in the second, a decree relating to another Ptolemy and his wife Cleopatra. These every Greek scholar could read and understand. But the Greek was evidently a translation of the hieroglyphic, and so was the demotic. Now in the first hieroglyphical inscription, in a place corresponding to the word Ptolemy, or rather Ptolemaios in the Greek, there was a ring, with certain characters, or pictures inside: in the second, and at the place corresponding to the words Ptolemaios and Cleopatra in the Greek, there were two rings, with characters inside; and the first of these was the same as the ring in the

other inscription. There could be little doubt then, that this was the hieroglyphical expression for the word Ptolemaios. The happy idea then occurred to Champollion, that the signs within the rings, were simply letters, alphabetical letters. Taking then the two rings (it was afterwards found that a ring round a name signifies it to be the name of a king or a queen) to represent the names Ptolemaios and Cleopatra, he observed the picture of a square block or package holding the first place in the first ring, and the fifth in the second; but P is the first letter of Ptolemaios and the 5th of Cleopatra. Again the 3rd picture in the first ring is a knotted cord; so is the 4th picture in the 2nd, but O is the 3rd letter in Ptolemaios and the 4th in Cleopatra. In like manner, the fourth picture in the first ring was a lion, so was the 2nd picture in the 2nd ring: but L is the 4th letter of Ptolemaios and the 2nd of Cleopatra: the square block, the knotted cord, and the lion represent P, O and L. Once more the 6th and 9th pictures in the 2nd ring were each a sparrow hawk; but A is the 6th and 9th letter in Cleopatra: the sparrow hawk denotes A. In this way the beginning of a Hieroglyphic alphabet was formed; and, as other similar inscriptions were discovered, it extended rapidly; and we were able to express hieroglyphics in letters of the English alphabet. This was a great step gained. The next followed at once; but was still more surprising.

Among the various races who now inhabit Egypt, there is one distinct from all the others, and numbering about 150,000 souls. They are called Copts, and, though more or less mixed with other races, they are the undoubted decendants of the ancient Egyptians. Their language, now little used but well known, is called Coptic. They now for the most part speak Arabic. Now it was found, when the hieroglyphic letters were written in English letters, that the words formed were in the main Coptic, with a slight admixture from the Hebrew and other tongues; and that the language of the ancient Pharaohs did not differ so much from the language of their modern descendants, as ours does from that of Alfred the Great. With this key, learned men, who knew Coptic, have learned to read the hieroglyphics. They have now an alphabet, grammar, and dictionary; and any person may learn to read the mysterious language on the monuments of Egypt, as easily as Greek, or Latin. Thus we have learned much, and we hope to learn more that will be most valuable and interesting to the antiquary and the historian; but that is a field on which we cannot now enter. The language, though in the main Semitic, has a considerable mixture of Arian, or Indo-Germanic roots. It would be a great step in the world's history, could it be

decided, whether the Arian is the original substratum, or an after introduction, like Latin into the English tongue. The admixture, even as a simple fact, is not without grave significance. We trust however that we have succeeded in explaining the way in which we have learned to read and understand what the men of Egypt, these very mummies, that one may touch and look upon, wrote 3000 or 4000 years ago.

Let us now turn to the tombs; for they are the old Egyptian Illustrated News. And first those of Egypt itself. Imagine an elevated limestone plain, from 150 to 500 feet above the sea level. Imagine a great wide rent in this rock, running North and South for full 1200 miles. The East side forms the Arab hills: the west, the Libyan. The valley between, now wide, now narrow is Egypt. In the bottom of this valley, resting on the bare limestone rock, is a bed of sand and pebbles, once the bottom of the sea in some unknown far away time. Now the Nile runs down it, carrying in its tide, and depositing on the sands below, a never ceasing volume of rich black mud. That mud is Egypt. It is still rising higher and higher, spreading out farther and farther into the sea, silting up the old harbour, and setting towards the mouth of the projected canal, with a slow, resistless, solid, onward drift which even the genius of a Stephenson feared to encounter. As high as the highest inundation reaches, that black mud covers the sand, and just so far extends the green strip of luxuriant vegetation, which made Egypt the granary of the world. All beyond the mud is sand, through which on both sides rises the bare limestone rock. The successive appearances of the country each year cannot be more vividly or more pictorially described than by Amrou the Arab conqueror of Egypt in a letter to the Caliph Omar:—‘Paint to thyself’ writes he, ‘O Prince of the faithful, a country which assumes by turns the aspect of a dusty desert, of a liquid and silvery lake, of a black muddy marsh, of a green and undulating prairie, of a garden filled with flowers, and of a long furrow covered with yellow corn’.

Egypt then may be looked upon as a long narrow trough between two bare walls of rock, with a dry sandy bottom. To the East and to the West extend the great sandy deserts of Arabia and Africa; and its Southern boundary is the Northern limit of the tropical rains. So very little rain falls on the North of this boundary, that it is not counted upon at all for any useful purpose. The very sand is impregnated with salt, nitre, alum and natron: so that Egypt is emphatically the driest country in the world. The Sun’s rays, blazing down into this dry sandy trough, and reflected from the bare arid rocks turn it into a huge natural

oven, where baking and drying have been going on, for thousands and thousands of years. This is how everything is so well preserved in Egypt. If you bury the body of a man, or an animal in the sand, it does not decay, but dries and hardens. Probably this was the real origin of the mummies. The dead may first have been buried in the sand, beyond the limit of vegetation between the Nile mud and the hills: but there they were liable to be disturbed by the wolf, and the jackal; and the obvious remedy was to cut tombs in the rock, where they would be secure, and to imitate artificially the preserving quality of the sand; and they succeeded. But it is not only mummies that are preserved. 'From the granite of Syene (says the author of Israel 'in Egypt) down to the coat of Nile mud, stuccoed and inscribed 'with hieroglyphics in colours, nothing appears to have undergone any change from atmospheric causes, since the day it 'was finished. Bread, fruit, flowers, bakemeats, corn, seeds, 'linen in quantities incredible, wooden figures of the most delicate execution are found in the tombs, as little changed by the '4000 years they have lain there, as the gems in the metal 'rings that accompany them.'

The Hindus burn, and the English bury their dead: the Egyptians turned them into mummies. Every town and district, had its temple and cemetery; and its establishment for making mummies. The body was given to the priests, and by them it was disembowelled, and the brain extracted: it was then steeped in natron, filled with spices, rolled in many folds of spiced linen, and restored to the friends after 70 days to be carried across the river in a boat, or a procession of boats, filled with real and hired mourners, and then laid in the tomb. There were cheaper modes for embalming the poor; and, whether from religion, or custom, there is reason to believe that for perhaps 3,000 years every dead body in Egypt was mummified. It is startling to think of the immense quantities of spices that must have constantly been used in embalming; and one cannot help remembering that the Ishmaelites, to whom Joseph was sold, were going down to Egypt with camel loads of spices, and myrrh and balm. Now, allowing three generations to a century, and giving ancient Egypt a population of only three millions, we are driven to the astounding conclusion, that room must have been found in the tombs and mummy pits, for more than 270,000,000 of dead and mummified Egyptians,—every man, woman and child of them still in the body,—the same body that walked about in Egypt thousands of years ago. But where could room be found, for such incredible multitudes? for the underground tombs of Egypt were on an equally vast scale with

the pyramids. One Egyptian noble, alone, had a tomb cut out of the rock with rooms and galleries for himself and his descendants that spread over more than an English acre. The answer to this is that the Cemetery of Memphis alone is 22 miles long, and half a mile broad, the rock for all that distance being a perfect bee-hive of cells, all swarming with mummies. On the walls of all these tombs and of all the temples, on every pillar, obelisk and statue, every square foot is covered with inscriptions and pictures, fresh and clear (in most cases) to this day. There you find family genealogies, and scenes from every day life; study, sport, feasts, wars, sacrifices; every art and trade, monarchs, priests, warriors, agriculturists, captives, slaves, men with fair hair and blue eyes, men with the Hindu features and complexion, and the black thick-lipped, woolly-haired negro: wild and tame animals, birds, beasts and fishes; you find all in these illustrated Encyclopædias of ancient Egypt. But the tombs are not only picture galleries and Encyclopædias: they are museums as well, containing numerous curious and interesting remains of the times of the Pharaohs, weapons and utensils, tables, inkstands, vases, pens, papyrus rolls quite readable, incense and smelling bottles, gems, gold ornaments, wheat, peas, beans and barley, which still have life in them, are found in profusion. Sir Gardner Wilkinson's '*Domestic Life of the Ancient Egyptians*' contains several hundred pictures, copied from the tombs, and describes and explains them with much truth and liveliness. We find that the Egyptians were a slightly built and rather small people. Few of the mummies exceed 5 feet and a half in height. They were on the whole a pleasant, mild looking race, not unlike the Hindus, and probably of much the same colour and complexion. The mummies are much blacker: but that is the effect of the bitumen; and their conventional colour on the monuments makes them of a darker, redder brown than they really were. They had small delicately formed hands and feet; and even in the stiff, formal art of the monuments there is evidence of considerable personal beauty. They were divided into (some say) seven great classes; but they had nothing, like caste; for the different classes intermarried freely; and it will be remembered that Joseph married the daughter of Potipherah, priest of On, apparently a high dignitary.

There is no doubt that they came into Egypt across the Isthmus of Suez, from the hills of the Caucasus, or the plains of Babylon; for the great temple of Belus or rather of the seven planets, the earliest (so far as we know) of the Babylonian buildings, so lately re-discovered and restored with such marvellous

truth and certainty by Sir Henry Rawlinson, was all but a pyramid, or pyramidal temple, in seven huge steps. They were neither poetical, nor imaginative; and their art, grand and imposing chiefly from its colossal scale, was untrue to nature; and for the most part designedly untrue. We have written of the prodigious size of their pyramids and rock tombs. Their temples were on the same scale of grandeur. They awed and imposed by their vast size and proportions.

A long straight avenue with a colossal row of Sphinxes, or lions with a woman's head, led up to a grand doorway. This again led into a vast open court, with shady porticos, avenues of trees and an immense tank or reservoir in the centre. Beyond and still going onward one came to a majestic archway with obelisks on each side, and thus entered a magnificent regal hall, its roof supported on innumerable pillars, beautifully and richly decorated throughout for those great festal, religious assemblies where the King himself presided. Beyond this still another court, opens in the centre, with the priests' dwellings and offices on three sides, and last and beyond all, rose another massy gateway with pillars, statues and obelisks, opening the way to the shrine, or temple, for the images of the three gods. The whole perhaps spread over a quarter of a mile at least, and the effect, even now, when nothing but ruins remain, is profound, impressive, even awful. The very statues were 120 feet high, and the Royal palaces were of a corresponding gigantic bulk and grandeur, but ordinary dwelling houses differed little from our own. They were of two or even three stories, with windows looking to the street; and often with beautifully laid out gardens with artificial fountains and tanks, and the walks were carefully watered every day. They seem indeed to have had quite a passion for flowers, and bouquets were presented to the guests at every banquet.

There is one picture, which particularly attracts attention, and we shall gather round it a brief notice of their domestic life. A gentleman has driven up to a friend's house in his chariot. His attendant is knocking at the door. Through an open window above we see the other guests already assembled and seated round the table, gentlemen and ladies side by side as with ourselves. Some sit in arm chairs of ebony inlaid with ivory, others on couches of beautiful pattern and design. On a side table behind you see gold and silver and alabastrine vases of graceful shape, and exquisite workmanship. Wine is cooling in porous vessels. The band is in waiting ready to strike up. The ladies are elegantly dressed, and the whole scene looks so thoroughly modern, that,

but for the eastern robes and odd looking wigs, which cover the head, you might take it for a dinner party in the year of grace 1860. But that dinner was eaten 4000 years ago. It would not be difficult to write down the bill of fare, and even to offer you food, that was actually put upon a table, or at least cooked, and made ready, when a Pharaoh sat upon the throne. The favorite dinner dishes were fish, beef, and goose. They had venison also, and the flesh of the wild goat and the antelope; game in abundance, partridges, grouse, quails, wild ducks, teal &c. These were roasted, boiled, stewed, grilled, pounded or minced and served up, with a profusion of vegetables dressed in various ways. One cannot but remember how the Israelites lusted for the flesh pots and the leeks and onions of Egypt. The kitchen is a favorite picture in the tombs. One sees the head cook in all his glory, and the servants cooking, dishing, and carrying up the dishes, every one of which may usually be recognized. Bread of wheat, rolls and fancy cakes were within every one's reach.

The fashionable dinner hour was noon. So we find in the Bible that Joseph's brethren dined with him at noon. The custom in great houses was to bring a beautiful bason to wash the guest's feet on his arrival, if he had come on foot: a fresh gathered bouquet was then presented to him, and renewed several times during the feast. They had seven or eight kinds of wine, all made in Egypt; and beer, or something very like it, for the poorer classes.

The master and mistress sat at one end of the table in a double chair. Attendants fanned the guests with feather fans. The band usually was composed of a harp, lyre, and guitar, a double pipe and a tambourine. They had drums and flutes also; and the music was accompanied with songs and clapping of the hands. In the drawing room, both before and after dinner, games were exhibited. Dancing was a favourite exhibition; but they did not dance themselves; they had dancing girls and male dancers, more like the modern opera dancers, than the dancing girls of the East; and their attitudes and pirouettes are immortalized on the walls of the sepulchres. Tumblers and jugglers were also introduced; and it must be allowed that the host did all he could for the entertainment of his guests.

In these tombs we may see pictures of people very like the modern Jews, making bricks, and their Egyptian task-masters standing over them. Here too we may see the Egyptians engaged in all their usual occupations, fishing, hunting, harpooning the hippotamus or the crocodile with the line all ready to pay out; and here we may see them sowing, reaping, ploughing, rearing cattle,

petting lap dogs, worshipping cats,—potters, glass blowers, gold-workers, diggers, weavers, mat-makers, cabinet makers, carpenters, boat-builders, chariot-makers, leather-cutters, sculptors, painters, public scribes,—their funeral rites, the ritual of the dead, their idols, their campaigns, courts of justice, foreign visitors and captives. Such then is the evidence to which we must appeal in any investigation into the questions and theories discussed in Bunsen's volumes; evidence which has been preserved to our day on the monuments, and on the temple walls, in tablets, and on papyrus rolls, names, dates, wars, and genealogies are found in profusion, and, now that the hieroglyphics can be to a great extent correctly interpreted, they tell their own story, and have become the common property of educated men. To compare with them we have the Bible, Manetho, Herodotus, Josephus, and the cunei-form inscriptions and records of Assyria.

On this comparison we shall enter, under Baron Bunsen's guidance, in a second paper.

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ART. VI.—1. *Land Revenue of British India.* By F. H. Robinson.

2. *Report on the Revision of Civil Salaries and Establishments.* By Mr. Ricketts.

WE have often heard it remarked that the intense heat of India must make it unbearable as a home for Englishmen ; and that no European can reside in any Indian station long, without experiencing that general breaking down of the constitution which can only be remedied by a visit to the hills or to England. This opinion is often supported by the broad assumption that though there may be very striking differences in the cold, there is very little difference in the heat throughout the Indian Peninsula, and that the sun is as powerful at 32° North as it is at 12° :—equally intense in Agra or Mooltan as it is in Ceylon or the Carnatic. This opinion admits of very extensive modification in its application to special localities, and will be found when applied to the Saugor and Nerbudda territories not to be strictly true.

Occupying a favorable position in the great central elevations of the peninsula, the Saugor and Nerbudda territories enjoy a climate which when compared with the climate of Banda or Cawnpore is as different as the climate of the Neilgherry Hills is from that of Madras. The following figures, the result of thermometric observations taken four times a day by Captain Pearson, will indicate the average temperature of these districts.

1860.—November,	...	...	...	...	...	62.5°
December,	...	...	...	...	...	58.8°
1861.—January,	...	...	...	...	...	55.0°
February,	...	...	...	...	...	62.3°
March,	...	...	...	...	...	73.8°
April,	...	...	...	...	...	86.2°

The temperature of these districts will be found to be far more endurable than the fierce heats of the Nagpore districts, and the unbearable warmth of the climate of the North West provinces. It is hazardous to base any general conclusions on imperfect data, still there is one test which from the unerringness of its results may be taken as a pretty fair criterion of the difference of temperature of different places. The temperature of the earth's crust, affected as it is by the heat of the sun, may be taken under some reservations as a correct indication of climate in the absence of any regular series of thermometric observations. The report of the magnetic survey of India gives us the following results :—

The temperature of the ground at  $6\frac{1}{2}$  feet below the surface in Agra, Jubbulpore, and Nagpore is thus represented by Mr. Schlagintweit's figures.

Agra, from February to March, .....	} 1856	74°
Jubbulpore in December, .....		72°
Nagpore in December, .....		84°

Indeed the climate has not unaptly been described to be one of the finest, if we except that of the hill stations, in central India or the Deccan.

These territories are equally attractive from their rich and diversified scenery. Extensive ranges of hills stand out in high relief; sinking by gentle gradients into the plains; mountain streams fringed with trees of the greenest foliage add to the beauty of the scene. Two parallel ranges of hills running through the entire length of the district form the limits of the Nerbudda basin. To the North the Vindhyan groups composed of the Kymore and Bundair ranges form the southern limits of Bundelkhund. To the South the Satpooras, extending from the Mahadeo to the Lanji hills, separate the Nerbudda valley from the Nagpore province. Between these two parallel ranges are intermediate spurs or detached and isolated hills presenting striking physical contours and abutting on the plains at a greater or less distance from the streams. That in a country presenting such marked physical features there should be much varied scenery is not surprising, but that it should at the same time in spite of much rugged and uncultivated land have a soil richer and more productive than the soil of any other part of India adds much to the intrinsic value of these acquisitions.

The soil is varied in character. Black cotton land, clay, and laterite alternate. The sandstone ranges and basaltic formations have for their distinguishing type the black cotton; the red laterite with its superficial accumulations of calcareous grits and iron nodules, is found wherever iron abounds; and the hard clay with its subsoil of boulders is found generally associated with rocks of gniess, granite, and mica. The black cotton will be found in many districts the principal soil; composed as it is of the detritus of basalt, it will be found chiefly in the locality of trappean rocks, and it is precisely in such localities that the soil will be found to be most fertile and productive alike of trees and vegetation. While these territories have thus within them the elements of much agricultural prosperity, they have also the sources of much commercial and manufacturing wealth. Coal is found at Mowpanil, at Nursingpore, in the Baitool district, on the banks of the Sakur and Towah Nuddees, and at Lemata

Ghat. Nodular iron ore is found among the carboniferous rocks of the Nerbudda valley. From Piperode to Nagode, and stretching far beyond Nagode over the low sandstone table-lands of the Bundair, the soil is a light red from the peroxide of iron that it contains. Iron is often found in the vicinity of coal. Already has the native iron been applied to works of public utility, the iron suspension bridge in the Saugor district is made of native iron. Where rains are so continuous and where the soil is so prolific, rank and impervious jungle is sure to extend over wide tracts. In these will be found many trees of economical value, furnishing solid and durable timber for railway purposes, and plants which will be found eminently useful in affording the best of Indian dyes, and the finest of Indian gums and resins. In a country reticulated by so many mountain streams, and abounding with so many and so diversified rock formations, there will be found many extensive quarries of marble and many kinds of stone, such as chalcedonies and jaspers which the native, skilful particularly where mere mechanical or manual labor is concerned, knows to work well. Possessing a genial climate it will be eminently calculated for European settlers, and free from the fierce heats, the destructive damps, the impalpable dust, and the vicissitudes of climate of the North-west, it will not prove destructive to delicate machinery. Its back soil is favorable for the growth of cotton at least of some sorts. Its natural facilities for artificial irrigation by means of canals, revetments and water works, might with a very small expenditure be made to quadruple its revenue.

In some districts as in Mundla and towards Sohagpore, extensive tracts are covered with high green grass; the rotation of crops is known; the crops are so abundant that grain is twice as cheap here as in the north-western provinces and Berar. In spite of capabilities so large and physical resources so many, these territories have never yielded a large revenue. From the time that they first came into our possession,\* when under the rule of the Marquis of Hastings, that long and arduous struggle with the light armed Pindarees, the Pandours and Cossacks of central India, was brought to a close, to the present day, when the last embers of the revolt of 1857 have been entirely crushed out, these territories have not regained their former prosperity.

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\* The acquisition of these territories may be reckoned from the 11th March, 1818. On the 13th June 1817, Saugor and the adjoining states had been made over to the English, by Bajee Rao Peishwa. See Campbell's *Modern India*, p. 129.

Amongst the deep glades and wild forests of Mundla, traces of a city larger than the present town of Jubbulpore still attest the prosperity of a former rule. Traces of dilapidated walls and ruined fortifications amongst the recesses of inaccessible hills in the Baitool and Seonee districts tend much to prove that, however uncultivated those districts are now, they were not always so.

The reports of the political officers and the letters of Sir Herbert Maddock bear ample testimony to the former wealth of these provinces ; many years later, when a committee of the Houses of Parliament met to pass the last East India Act, Mr. Francis Horsely Robinson while ridiculing with much clumsy satire the enthusiastic reports of those officers, evinced quite as strong a belief in the great and varied physical resources of these districts, as the most sanguine Civilian. He bears ample testimony to the fact of their former prosperity, and to their pauperism at the time when they became ours.

He thus writes.—‘The territory had been the seat of the war, and had been much ravaged and plundered by the Pindarees. The bulk of the inhabitants having gone into exile, had left their land waste ; and our acquisition at first presented the aspect of uncultivated fields and empty villages. But as soon as a regular Government was established, the officers of that day, though not generally less prosaic than the general run of Government servants, may be observed to use language made lyrical by the subject, in describing the return from different countries of the expatriated village populations headed by their patriarchs ; the re-raising of the fallen roof-trees, the re-consecration with songs and feasts of the profaned village temple, the solemn distribution of the ancestral lands among the descendants, in many cases, of the original emigrants ; the ceremonious driving of the disused plough into the soil, long fallow, and the apparently miraculous restoration of population and tillage.’

It would be interesting to enquire how much real prosperity had accrued to these districts during the period of our rule. It would certainly not be an uninteresting task to sketch in outline the peculiarities of the revenue system ; the nature of the revenue assessments, and the features of its judicial administration. Those who have read the four circulars of the Board of Revenue published by them many years ago, will have formed an accurate idea of the revenue system of the North Western Provinces ; the nature of the different tenures, the principles of the assessment, the rights of the different classes, and the features of the survey, and the record of those rights. For those who have not read them, a few remarks may perhaps not be out of place.

The land must ever be the source of its greatest wealth to India. It becomes therefore an object of especial interest to study the nature of the rights which are connected with the land. Those rights will generally resolve themselves into two; the right of the occupier to cultivate the land subject to the landlord's rent, and the right of the landlord to appropriate that rent subject to the deductions of a fixed assessment. There are three recognized tenures in India; the Zemindaree, the Putteedaree, and the Ryotwaree. While in Madras and Bombay the Ryotwaree prevails; in the North Western Provinces and in the Saugor and Nerbudda territories the Zemindaree and Putteedaree tenures exist co-extensively. It follows therefore that in Madras and Bombay the occupier is the owner, and his right is paramount. In the Saugor and Nerbudda territories on the other hand the rights of the occupier are respected simply from the scarcity of labor, but legally there exists a superior right which demands our consideration. That is the right of Zemindars, Malgoozars or Potails. In the North, in the wild and rugged country which borders on Bundelkhand, there have always been a few hereditary families, the head men of the communities who have always been recognized as potails, with whom the earliest settlements were made and who were generally responsible for the punctual payment of the government revenue. These men are mostly of the Gond or Rajput races. Their rights, acknowledged by the communities around them, are strictly hereditary. Owing to their isolation of position and freedom from the Mahomedan vice of polygamy, the potail tenancy has never given place to the ryotwarree tenures. Under the Mahomedan law, inheritances whether of moveable or immoveable property, have always a tendency to break up into subdivisions. The children of one mother have as much right to inherit property as the children of another. It is not therefore surprising that in the south among the fertile plains and populous towns of the Nerbudda basin, where there is a greater infusion of Mahomedan blood, and a greater approximation to Mahomedan ideas, there should be a tendency to the putteedaree tenure. Two forms of tenure were thus found to exist together; and in the early settlements, while in the potail villages engagements were taken with the potails, and in putteedaree villages with the person selected by the brotherhood, recognition of individual proprietary rights was carefully avoided.

In the Saugor and Nerbudda territories land was not brought to sale for revenue default. This and the lightness of the first settlement did much towards the restoration of the former prosperity of these provinces. That settlement though highly

beneficial from its lightness was at the best a rough one. Those who are acquainted with the different processes which constitute a settlement, now, will at once see how imperfect the first attempts towards the settlement of these provinces had been. No identification of the land was made; no preliminary measurements were undertaken. As no rights had been acknowledged, there was no adjustment or record of rights, either of the proprietors or of the cultivators. Only two of the processes which constitute a settlement now, had thus been made; an adjustment of the rents to be paid, and a disposal of claims to hold rent free land. It is not surprising then that that settlement should have called forth the animadversions of Mr. Thomason in 1847, or that ten years had not elapsed before another settlement was ordered. It was suggested that an accurate survey should be commenced; a minute record of rights made, every necessary information on the resources, and statistics of the country supplied.

To carry out these designs it was necessary to appoint officers for the settlement and survey duties of those territories. In accordance with these views, to each district a Deputy Collector was appointed. The selection was not perhaps made judiciously. The men were with scarcely any exception, natives, who had been employed as sheristadars in the Commissioner's office at Jubbulpore. There is too great a tendency generally to give appointments to natives, whose only claims to them are based on their having been for some time in the great man's kutcherry. Where this is generally done, as it has been in the Saugor and Nerbudda territories, efficiency can not be the result; nor can the administration be satisfactory. From the specialities of some departments much harm may result. It is so with the Department of Surveys. A few figures will illustrate our meaning. We have not at present the data by which we can arrive at the average of the rate per square mile on the entire area surveyed in these provinces, but that expenditure cannot be less costly than the sums which have been expended on the surveys in Bengal. How large that expenditure was the following table will indicate.

Year.	Area Surveyed.	Total cost.	Rate per Sq. Mile.
	Square Miles.	Rupees.	Rupees.
1850-51.	3,565	316,164	90
1851-52.	3,826	370,254	96
1852-53.	4,246	385,889	91

These sums will serve to indicate roughly the cost of the Surveys in these provinces. If we are not very much mistaken, the expenditure will not be less; yet with the distribution and employment of sums so large, a native who had perhaps a few years before been a Mohurrir on Rs. 15 per mensem is entrusted. It is evident that the object of the Survey, which is to produce a permanent record indicating the most detailed specification of landed property must fail to be realized.

The survey of these provinces has not yet been completed. In Saugor and Jubbulpore where the areas to be surveyed are not much more than 4,000 square miles, and where survey operations had commenced more than ten or twelve years ago, the survey is very nearly brought to a close. In Baitool which embraces an area of more than 3,000 square miles, and where with the exception of about 300 villages, surveyed before the mutinies, survey operations had scarcely commenced before July 1859, the actual survey operations have been brought to a close; a rough, approximate topographical map compiled, and the settlement has been commenced. This difference in results may perhaps be ascribed to the difference in the superintendence of the surveys in those districts. Natives have always been in the executive charge of the surveys of the former districts. In Baitool an officer of the Revenue Survey was appointed in 1859.

Contemporaneously with the Khusra surveys, two other surveys, the Revenue and the Geological, labored in these provinces. A series of the Great Trigonometrical Survey had traversed these districts nearly thirty years before, and had fixed their stations on the most prominent peaks and ranges of the Nerbudda country, and their data were taken as a basis for the commencement of the Revenue Survey operations. Owing to the mutinies in 1857 Survey operations had to be suspended, and the two Surveys were transferred to the province of Nagpore. One of these surveys, under Lieutenant Oakes has since been re-transferred to Jubbulpore. There is in the workings of this Survey department, much to commend. Accuracy in facts and statistics, correctness in surveying, artistic skill in manipulation, rapidity in the execution of the work, and cheapness in its production, are amongst its most noticeable features. That these should be among the results, follows necessarily from the system which was adopted. The survey is principally made by the theodolite; that instrument is used in the survey of the main circuit, and of village circuits; the interior details of each village with its topographical features are filled in by means of the plane table or the prismatic compass. The work is entirely the result of European superintendence.

The main circuits are surveyed by European assistants, the areas calculated, the maps projected, the bearings laid down, and the trigonometrical checks applied by them. There is in the department, very justly, a conviction of the general inaccuracy of native work, and no native is allowed to do any higher work than that of the mere Ameen. Complaints of inaccuracy are also made of natives in other departments as well.

While the Revenue Survey has been useful in producing statistics and in making maps, the Geological Survey has not been less useful in directing public attention to the metallic and mineralogical wealth of these territories. There are indeed few sections of India which are more interesting in a lithological point of view. To the geologist the Nerbudda basin must always form an interesting study. Among the Vindhyan ranges and their associated rocks, there is much to repay scientific research. That there are coal-bearing strata, even Mr. Oldham will allow. That iron is to be found in the vicinity none who have traversed this country will doubt. The vicinity of the coal to the iron must make this section of India, when the Railways are open, as valuable as the sections in the vicinity of the Rhotas hills, the Raneegunge fields, and the Soane river. Separated from the Nagpore country by the Mahadeo hills, it is as different in general physical features from that district, as it is in its orographical and lithological features. To this day no identity has yet been discovered between the rocks of the Nerbudda basin, and those which form the principal ranges of the Nagpore district. There are still wanting links to identify them with the Raneegunge series, with the Panchet, Damuda or Talchir groups. In speaking of these series we retain the nomenclature of the Geological Survey. The problem which that Survey proposes to itself is to indentify the rocks of India with those rocks in Europe which have been grouped into series by European geologists. Isolated as this Survey is at present from the others and few as are the assistants which constitute its staff, the discovery of each fresh fossil remain must add to their knowledge by furnishing fresh links to the chain of discoveries already made, and will help to fill up those gaps which even in India so widely separate one rock series from another.

The principal ranges in the Saugor and Nerbudda territories are the Mahadeo hills, and the Kymore and Bundair ranges; between the Mahadeo and Kymore ranges are the plutonic and crystalline rocks to which Mr. Medlicott applies the name of Sub-Kymore. Of the Mahadeo group nothing is as yet known. These hills form the northern base of the Nagpore territories, and far beyond the present limits of the Nagpore territory stretch

between the inaccessible country between Baitool and Chinwarra to the Nerbudda river, where amongst its wild recesses that hill marauder Bhuboot Singh recently took shelter.

They extend in a direction from north to south between the parallels of  $21^{\circ}$  and  $22^{\circ}$  north latitude, presenting a bold and well defined outline. Between Chindwarra and Mooltye they attain a height of more than four thousand feet. Amongst their wild gorges, and deep glens, among their precipitous waterfalls and abrupt sides, steep acclivities and numerous fissures, much wild and picturesque scenery is to be found. The principal rock strata of this range are composed of sandstone shales. The sandstone is often seen striped with dark ferruginous bands, which give it an appearance not unlike that of the Kymore sandstone in the vicinity of Jukehi, or the sandstone in the Nagpore District. From the very few fossil remains that have yet been discovered, it has been impossible to fix the age of these hills.

Only a few vegetable fossil stems have as yet been discovered. There are few or no traces of any molluscs or crustaceæ. Like the Kymore, it has been usual to ascribe these rocks to the era of the formation of the new red sandstone. From the fossil indications that we have, that era appears to be too ancient; the upper sandstone which forms the mass of the Mahadeo hills, and of so many others of less elevation appears to be more recent. While the plant beds underlying are decidedly not more recent than jurassic, and are probably a transition between the lias and jura transitions; the coarse arenaceous beds themselves that are frequently characterized by the ferruginous bands already mentioned, are to be classed among the upper members of the cretaceous series. There is some doubt as to the true position of some of the shales that are ranked as under the plant beds. Between the Mahadeo sandstone ranges and the Kymore and Bundair hills are to be seen the granitic and schistose hills of the Nerbudda basin. The peculiarity in the position of these rocks has always struck us as noticeable. Still it is not alone in the Nerbudda basin that the granitic, crystalline and schistose rocks are found between outlying ranges of sandstone and limestone. This peculiarity is also seen in the Nagpore districts. It adds another illustration to M. Pallas' theory. While examining the mountain chains of Siberia he laid it down as a general rule, that in the formation of mountain chains, granitic associated with schistose rocks will be found in the centre, while outlying them will be seen the great sandstone or limestone ranges. It is thus in the Saugor and Nerbudda country. To these ranges Mr. Medlicott gives the name of Sub-Kymore, and supposes that they may be a continuation downward of the

Vindhyan group subsequently altered. These rocks are metamorphic. They consist principally of pseudo gneiss, micaceous and quartzose schists, and limestone; intrusions of granite are frequently seen.

The transition from these to the red sandstone of the Kymore and Bundair hills is easy. Few chains are more interesting in a lithological point of view. They extend in a continuous direction throughout the Saugor territories, forming the Northern face of the Vindhyan ranges; they stretch into Bundelkhand, and far beyond Bundelkhand into Behar, where they abut in well defined outline not far from the Ganges. Two parallel and well defined ranges constitute this group. While the Bundair ranges present a succession of plateaux with a continuous and well marked scarp, the Kymore hills present a series of anticlinal ranges at places rising to a height of more than three thousand feet, and at others scarcely rising above the level of the fields. These hills form a cul de sac with the Bundair table land. In the Jubbulpore district they may be seen extending on the North bank of the Heron, from Heerapore to Amerkho. Further North they stretch in the same continuous direction through Purgunnas Bouribun, Belheree and Jukehi. They are separated from the Baurer by deep intervening strata. At the base of this line of hills are the ancient villages of Gondwana. Amongst the wild recesses, traces of ruined buildings and temples like those at Belheree may still be seen; near Heerapoor there are many such. At Ummurgurh ruined and dilapidated walls are covered with trees, whose age could scarcely be less than a hundred years. Far from the present haunts of men, it is amongst these last traces of a former dynasty that the hyæna makes his lair, or to use Bishop Heber's words, that the jackall's cry is heard making a sylvan revelry. It is amongst such ranges as these, that those deep gorges, and bold precipices are seen so full of wild grandeur.

In mineralogical character these hills are principally sandstone. Oolitic limestone and shales are also met with. We have not before us at present a list of the fossils yet discovered peculiar to these ranges. It would in the absence of such data be hazardous to refer them to any known era, still it is more than probable that they are older than the Mahadeo. Captain Franklin referred them to the age of the middle portion of the new red sandstone; Dr. Carter identifying them with the coal-bearing rocks of Bengal ascribed them to the oolitic or to the jurassic periods; Captain Sherwill who had not had an opportunity of making any personal observations, referred them to the old red

sandstone; while Mr. Oldham who should speak *ex cathedra*, describes them as belonging to the upper carboniferous or newer coal measures, and partaking in their nature of the Damudas.

Still until further discoveries have been made; until fresh links have been added; and until more certain fossil indications have been found, no reasoning from mere analogy will enable us definitively to fix their era. When their age has once been definitively fixed, there will be a greater simplicity in the classification of our Indian rocks, a classification which as has been suggested would appear in the following order.

1. Mahadeos with sub-group of Lemata beds.
2. Rajmehals.
3. Upper Damudas of Jubbulpore and Central India.
4. Lower Damudas.
5. Talchirs.\*

The Saugor and Nerbudda territories at present embrace the districts of Jubbulpore, Saugor, Dumoh, Mundla, Seonee, Baitool, Nursingpore, and Hoshungabad. In the absence of surveys

\* Mr. Blandford's Synopsis of the Damuda, Talchir, and Panchet, gives the following results.

Names.	Description of beds.	Fossils.	Thickness in feet.
I. Upper Panchet, ...	Coarse Sandstones and conglomerates.	Unfossiliferous.	500
II. Panchet Group, ..	Coarse Sandstones; very false bedded, &c. red clays, greenish and grey shales.	Ferns distinct from Damuda forms. <i>Tæniopteris</i> , <i>Sphenopteris</i> , <i>Schizoneura</i> , Reptilian and fish remains.	1,500
III. Damuda Groups,	Coarse and fine Sandstones, mostly false bedded and felspathic, Shales, Coal seams. The latter continuous over considerable areas.	<i>Vertebraria</i> , <i>Trizygia</i> , <i>Glossopteris</i> , <i>Pecopteris</i> , <i>Schizoneura</i> , <i>Phyllothea</i> , all plants.	5,000
b. Lower Damudas ...	Coarse conglomerates; white Sandstones; mineral coal seams of very irregular character.	<i>Glossopteris</i> , <i>Vertebraria</i> &c.	2,000
IV. Talchir Groups.	Coarse Sandstone, fine Sandstone composing undecomposed felspar.	Very rare, a few stems and seeds.	800

and other sources of accurate information, our statistics may not be as correct as we could wish, but the following figures will be found to give an approximate idea of the areas of these districts.

Districts.	Population.	Area.	Land Revenue.
Saugor, .....	454,390	4,000	567,558
Dumoh, .....	389,555	2,430	310,178
Nagode, .....	383,500	1,838	181,465
Jubbulpore, .....	300,000	4,700	648,787
Seonee, .....	227,070	2,884	136,255
Mundla, ... ..	225,092	6,170	37,303
Hosingabad, .....	361,515	5,000	343,120
Baitool, .....	138,278	3,421	140,003
Nursingpore, .....	214,205	2,003	316,842
* Total, .....	2,593,605	33,452	Rs. 2,681,571

With an area of more than 33,000 square miles, the land revenue of these territories does not exceed more than  $2\frac{1}{2}$  millions of Rupees. The revenue for so large an area is very decidedly low. The land revenue of the North West Provinces on an area of 71,972 miles is 70 millions, that of Bengal on an area of 113,000, is 30 millions.†

The assessment in the Saugor and Nerbudda territories has not been heavy. It has been very much lower than the assessment in the N. W. Provinces, though not perhaps lower than its former assessment under the Hindoo and Mussulman periods. Indeed the general tendency under the British system is to increase the assessment. The ancient Hindoo Governments theoretically were said not to have taken more than a sixth part of the gross produce. The Hidaya under the Mahomedan declared it to be unlawful to take more than a half. Under the British system the assessment has generally been assumed to be two-thirds of the rent; in the Saugor and Nerbudda territories in very few instances is it more than half. In Hoshungabad and Baitool, where Major Ouseley assessed, the settlement though not based on any accurate or minute knowledge of the capabilities of those districts has been favorable. No test can be better

\* Campbell's Modern India, Note, p. 322.

† Mr. Rickett's Report.

of the popularity of our administrative rule in the Saugor and Nerbudda territories, and of the peaceable character of the people, than the simple circumstance that, from the commencement of our rule to the present day, no coercion in the collection of the land revenues has been employed beyond the simple processes of law. In recovering arrears occasionally and at wide intervals, a few exceptional cases of tyrannical treatment on the part of some native Tahsildars may have occurred; but the instances are rare, and payments have always been made freely. This contrasts favorably with the more rigorous systems adopted in other parts of India. Compared with the ill-organized and tyrannical systems adopted under the old Indian government, if it tends to prove any thing, it must shew that either the social status of the people is very much improved, or that our revenue administration is very much milder, more popular and more suited to the existing state of property, and to those complicated tenures which always make it difficult to adopt any uniform or simple rules of procedure. That great cruelty as well as great oppression had in the most populous and best governed states under the native rule been practised, none can doubt. No one who is acquainted with the native character, or with the nature of the Indian government before the fabric of the Mussulman empire crumbled away, will find anything startling in Mr. Mangle's statements before the House of Commons, or any thing surprising in acts which have found a parallel in our own days in those acts of torture which have occurred under our own government. It does not read strange to us that in 1732, Rustum Khan should have hunted defaulting Zumeendars in the Northern circars, and after having flayed them alive should have erected a pyramid of their skulls; that the Rajah of Purneah should have been enclosed in an iron cage, pulled up to the top of a tree, and like Mahomet's coffin should have been suspended between heaven and earth, as a sight in *terrorem* to all contumacious landed proprietors; that in Moorshedabad native revenue officers should have made pits filled with ordure and filth, or leathern pantaloons filled with biting insects and reptiles for the special use of defaulting landlords, and of needy cultivators. A resident of Lucknow wrote to Lord Hardinge not many years ago, that a native collector sold a thousand men, women and children into slavery in order to realize his revenue. In the Saugor and Nerbudda territories, during the wild rule of the Mahrattas, the number of rude mud forts attached to nearly every large village still attests how often the collection of the land revenue had been resisted; and how frequently the cultivating community as well as the landed proprietors had

recourse to the shelter of mud walls against the raids of their tyrannical and grasping rulers. No mud fortresses are now to be seen. Occasionally a few standing walls may be met with as in Purgunnah Byrokhat at Jubbulpore, and in Saoligurh and Bow-ergurh in the Baitool district, in the centre of wild and dense jungles, overgrown by high brushwood, and undisturbed by any other sounds than the wail of the jackal or the howl of the hyæna. But nearly all those attached to villages are fast crumbling away, and in their dilapidated condition indicate a state of greater security, and of greater cheerfulness among the agricultural masses.

That there has been a considerable increase in the prosperity of these Districts there are few who would doubt. That increased prosperity is in a great measure owing to the superiority of its present government, to the improvement in its political institutions, and to the lightness of its assessment. A knowledge of the spirit of the Mahomedan polity will best be acquired by a study of the characteristic features of the Government of a smaller subdivision of the Mogul Empire. The machinery which constituted the Government of the Saugor and Nerbudda territories was of the same nature as that employed in the administration of the other subdivisions of the Empire. The country south of the Nerbudda, as well as the country in the immediate vicinity of that river, formed a part of the Deccan; like other subdivisions it was governed by delegates holding their appointment nominally from the Emperors, but in reality exercising powers almost despotic. The subordinate establishments under them, as subordinate establishments in our own day, under even the most active of our officers, were not entirely free from some vices inherent in the native character; and not entirely untainted by some crimes which when judged by the standard which in our own days we should apply to similar acts, would be considered highly culpable.

Kurdars and Mamlatdars were appointed to purgunnahs, and in the exercise of an absolute control over the property and liberties of the people, too often abused those powers, and enriched themselves at the expense of the people they were delegated to govern. Sometimes in the capacity of agents to the sub-governor, they were appointed to larger divisions. In proportion to the strength or weakness of the government he served, his demands on the people were exorbitant or moderate. Under the Mahratta system these officers of state were often rulers of feudatory communities, and under the title of soubhadars exercised unlimited general control; while in their military capacity they had the chief direction in all arrangements connected with the police. Under the British

Government, kardars have ceased to exist; and the last of the soubhadars have been pensioned, or like the present proprietor of the Boredha Talook in the Baitool District, have been allowed to hold, under rent free tenure, the villages which were granted them by former rulers for the services which they or their ancestors had performed for the state.

Exercising a more intimate influence over the workings of the village communities, Zumeendars, Canoongoes, and Putwarries perform in the present day very much the same functions that they did before. The Zumeendar, Malgoozar, or Potal is still the recognized head and the representative of each township. The Putwarrie and the Canoongo are still the hereditary accountants of each village and purgunnah. With the extinction of the old patriarchal simplicity of the character of the village communities, and the introduction of the democratic element in the working of the village system, the respect attached to the hereditary office of the Zumeendar will cease to be felt. With the gradual introduction of our own copious written records, and our minute specification of landed interests, the local influence of the hereditary village and purgunnah accountants will cease to be exercised. Whatever changes may have taken place in the official machinery employed in the collection of taxes, or in the general control and management of the village communities, there has been no change in the communities themselves. In their constitution, in their workings, in their social feelings, in their political institutions, they are the same in the present day as they were before the invasion of the Greeks; as they were before the first Mahomedan conquerors invaded India; as they were before the first Europeans landed on their shores. To the present day the village communities throughout India as well as in the Saugor and Nerbudda territories, retain the same form of patriarchal simplicity, for which they were remarkable nearly two thousand years ago. They still retain all those characteristic features, as described by Menu; and that peculiar form of self-government, as described by Elphinstone and Mill. They conduct their own internal affairs, still collect and pay their revenues through their headmen; still administer among themselves a rude and primitive justice by their system of punchayut; like all agricultural communities, their best interests, their claims and rights are bound up with the soil which they cultivate. Anything, which interfered with those rights and which lessened those interests, was regarded by them as the one evil which they had most to dread, as the one thing which in its results acted more directly than any other thing on their welfare, and

means of future happiness. From the very earliest times therefore the Government has given its first attention to the land settlements in India. It is not necessary to revert to the Hindoo legislation on this subject, to the detailed system originated by Shere Khan and afterwards completed by Akbar, or to the subsequent elaborate directions published by his orders and carried out by Malik Ambu and other Revenue Officers. Under our own Government there are few branches of the administration which require more careful attention. From the time when Lord Cornwallis gave the subject his study, and originated the permanent settlement of Bengal to the present time, there are few subjects which have been so much discussed, or into which so many fallacies have entered. While officers in the civil and judicial departments are guided by the regulations; the settlement officer has to trust to his own local experience; to his intimate knowledge of the capabilities of the district. He requires to have the most minute knowledge of those complicated tenures, and of those rights which are found to exist.

Proprietary right at the best is little understood. Ignorance on this point may sometimes be attended with much harm. When in execution of the commands of the Court of Directors, Lord Cornwallis conferred proprietary rights on the men who bore the titles of zumeendars; he committed as great an error as that which had been previously made by those, who in a less philanthropic spirit had entrusted them to the money speculators. In both cases great alienation of landed property and hereditary rights was the result. In England few subjects have given rise to more lengthened disquisitions. In India few subjects require more careful study.

In different districts where different tenures exist, it is impossible to apply an uniform system which will equally adapt itself to every existing usage, and to every acknowledged right. The laws of procedure which applied to Bengal were found when introduced into the North West to fail signally. When Lord Wellesley, during the season 1807-8 endeavoured to introduce the permanent settlement of Bengal, into the North West, the Commissioners who were appointed to carry out those orders protested against its unadaptability, remonstrated, appealed, and finally sent in their resignations. The tenures of Madras presented a still greater diversity, and in the Bombay Presidency the system could not be introduced without materially impairing the forms of the tenures. It is not too much to say that, an equal difficulty will be found in the Saugor and Nerbudda territories.

The new assessment of these territories it is to be hoped will result in an increase of revenue, the last settlement was made for a period of twenty years. No boundaries were marked, no accurate statistics formed, the capabilities of the districts, the basis of that settlement, were only approximately guessed at. The terms were easy. Dense jungles, still uncleared, formed a barrier to cultivation. In these villages the revenues charged were of the nature of a small rent, very often only nominal. Amongst the wild Gond villages which skirted and covered the base of the table elevations of the Satpoora, Mahadeo, and Bundair ranges, the proprietary had no men of enterprise, or capital amongst them. Devoid of the energy of the Rajput classes, and without the acuteness, the cunning, the skill, and love of gain which have always characterized the more wily Mahrattas, to have over-assessed them, instead of calling forth fresh energies and new incentives to labor, would have tended to discourage the cultivation of their estates. The light assessments, while they have hitherto enabled them to enjoy a comparatively large surplus profit, have led to a large extension of cultivation. With terms so moderate, and with a settlement so popular, there were yet some difficulties which could not be easily met, and which unfortunately for the people do not appear to have been met at all. Proprietary rights were not sufficiently investigated. An imperfect title must tend to lower the value of property. Where no proprietary rights are acknowledged, the head man of the village must sink into the position of a Government farmer or lessee. Such appears to have been the position of the proprietary with some exceptions in these districts. They had but an imperfect proprietary interest in the land, and imperfect as that title was, it was yet more invalidated from its liability to expire with the term of the settlement. They enjoyed, it is true, a surplus after paying the Government Revenue, but it was a surplus which resulted from the unusual lightness of the assessment, and not one which was the natural result of increased industry, of accumulating capital, or of a system of improved cultivation.

Ten years after the settlement had taken place these features attracted the attention of Mr. Thomason. In a minute dated the 25th March 1847, and which may still be seen amongst the records of the Government office at Allahabad, he thus writes. 'Such a state of things must be fatal to the property of the country, and imperatively requires remedy.' That remedy will be best applied in the selection of proper material for the execution of this work. The investigation of rights have at present been entrusted to Deputy Commissioners. This is an error; the additional

work thus imposed on the chief district officers, must be as distasteful to them as it is injurious to the people; there is a point where the desire to economise becomes the inevitable and fruitful source of reckless expenditure, and extravagant waste. There is a limit to industry, to untiring zeal, to great devotion to work even of the highest order. The officer who would undertake to get through satisfactorily the heavy judicial work, the extensive revenue suits, the endless summary ones, and at the same time devote his attention to the general supervision of his district, to the Police duties, to the income tax assessments, to the construction of new roads, and to the erection of new bridges, to the investigation of civil suits, and to cases under appeal, to the inspection of the jail, the treasury, and the constabulary, should be made of very different stuff to the generality of Government servants. That so many and so diversified duties should be performed by one officer is too much to be expected, but that to these he should add the duties of a settlement officer is almost to expect an impossibility. It was to many years of untiring patience and energy devoted to a single department, that Mr. Muir, Lt. Col. Ouseley, and Mr. George Carnac Barnes owed their reputation as good settlement officers.

Every one who has given his attention to this work must know how imperative a necessity it is to give up his entire time, to devote his entire energies, to obtain every possible information, to acquire the most accurate data, to eliminate every possible fallacy. 'The home of the settlement officer from the 1st December to the 1st of May should be his tents,' wrote the Board in 1850. It requires but a surface glance at the laws which refer to land settlements, to show how necessary for the execution of this work it must be to follow out those instructions.

The salient features of those laws clearly indicate the expediency of adopting personal enquiry in order to ascertain the capabilities of the soil, and the produce of the land; they shew too the necessity of exercising a strict control over the returns furnished by the natives, of the most careful enquiry into local rights, ancestral customs, established usages, and extent of interests, of the most searching and careful investigation with regard to proprietary rights, to claims to hold rent free grants which should be resumed, invalid tenures, and lakhiraj lands.

The plan so successfully adopted by Major Elliot in the Nagpore Province should be extended to these districts. Superintendents, and Deputy Superintendents should be appointed from the European officers of the khusra survey. They have the sympathies of the people. They understand the district they

have surveyed. Their preparation of all the documents which form the basis of the settlement gives them an acquaintance with all those minutiae of detail connected with the specification of property so necessary to this work.

We are not optimists either in government or in law. In every system of laws, as in every human institution, imperfections must exist. It is not therefore surprising that our system of Indian laws should have been found defective, and that so early as 1833 special parliamentary attention should have been directed towards it. There is however in those voluminous records of legislative talent embodied in the pages of our Indian acts, much to admire. It is their wonderful adaptability to Indian usages that has made them so useful. That errors do exist is to be regretted. Great errors are often made by the most careful of jurists; and too often perpetuated. It is its adaptability to every possible case which must prove the efficiency of a law. That law is not efficient which cannot remove a grievance, which cannot restrain crime, which tends to foster litigation, which is unadapted to the special grievances for which an action for redress may lie, which is not conformable to existing rights, to established usages, to religious instincts, or to landed institutions. In the Saugor and Nerbudda territories as throughout India, the courts have in many instances been guided largely in their decisions by Mahomedan law. In cases of preëmption, gifts, inheritance, marriage, endowments, dower, divorce and minorities, the Mahomedan law is referred to for guidance.\* Indeed nearly the entire Indian code is built on Mahomedan law. That the laws should be cumbrous, verbose, complicated, or wanting in a certain nicety of discrimination, results simply from the circumstance that those who made them had no time to methodize or to condense. In India everything is practical. Everything is regarded in its character of effect; nothing is traced up through a sequence of logical reasoning to its cause. With that practical instinct which belongs alone to Englishmen, the material is grappled with as it presents itself. Our laws, as might be expected, exemplify our characteristic in this respect; they do not abound in the happiest analogies; they are not based on absolute right, nor replete with refined distinctions, but offer so many tangible guides for the magistrate's every day reference. Thus it is that even those whose bitterest sarcasms have been levelled against the inefficiency of the pre-

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\* The Mahomedan law has been modified and amended by Regs. IV. and XIV of 1797; VIII of 1799, and VIII of 1801; and LIII of 1803.

sent existing code, will admit that in many cases under existing circumstances that code requires no remodelling.

It is too often the habit to ascribe to Indian legislators, a deficiency in philosophic reasoning, and employing the sarcasm of Burke to state, 'that if they attempt to go but one step beyond the immediate sensible qualities of things they go out of their depth,' the censure is misplaced: they are as they are *ex necessitate*. Still it must be regretted that principles should be so little dealt with, and that crimes which involve many different shades of moral turpitude should have the same punishment. Forgery, arson, rape, perjury, adultery and affray with violent breach of the peace are classed together. Gambling which is so common amongst the lower classes of the natives in these territories is left out of the schedule, and is punished under the general regulations; and the law of honour which is not recognized amongst them is more binding than the law of the land. Perhaps the reason, that anomalies like these have so long been allowed to exist, is that Indian law to most readers is a closed book. It is unfortunate too that such digests of it, as have yet been published, should not be more attractive in their manner of treatment. It is indeed much to be regretted that those who have written on Indian law, Henry Carre Tucker, Skipwith, Beaufort, Macpherson, and Thomason should be compilers and should have simply restricted themselves to dry digests, or abstracts. To this general rule Beaufort furnishes a solitary but not a brilliant exception, and his work nowhere abounds in that terse and concise language, nowhere shews that lucid eloquence in unfolding principles, that calm disquisition in separating the specious from the true, that philosophical accuracy in making statements, that clever acumen in exposing sophistry which at once distinguish and characterize the legacies of Montesquieu, and Blackstone.

The administration of the Saugor and Nerbudda territories has given rise to much discussion. The present system of administration differs considerably from that of Oude, or of the Punjab. Though a non-regulation province, there is not as in other non-regulation provinces, the same uniformity of system, or the same simplicity of procedure. There are too some anomalies inseparable from the want of uniformity in the Revenue and Judicial administration. Indeed in one sense the government of these territories has been an experimental one. From the time when these territories were first acquired, when in 1819 the political resident at Bundelkhand first suggested that they should be divided into seven districts, and that one Commissioner and four

Assistants should constitute its staff of officers, to the present day, new officers have been appointed according to the exigencies and requirements of the work, and the rules already in force in the older regulation provinces introduced as necessity required. Several years elapsed before a civil or sessions Judge was appointed. To this day, it retains the same cumbrous form of administering civil justice, entirely through native functionaries, which during Lord Ellenborough's time elicited so much comment.\*

The Commissioner has always had the chief general control of these districts. The civil and sessions Judge exercises the highest judicial and civil jurisdiction. In judicial matters, while exercising original jurisdiction in the trial and final disposal of criminals committed by Magistrates, his is the highest appellate authority in these territories, with regard to all judicial cases decided beyond the limitations of Act VI. of 1803 by Magistrates or their assistants. Deputy Commissioners are invested with full Magisterial powers. The judicial powers of a Magistrate in India are so well known that it requires an apology to allude to them here. The principal cases to which his jurisdiction extends are burglary, where the offence has not been committed with murder, wounding, or corporal injury, or where the criminal has not before

\* This scale indicates the annual cost of the administrative and ministerial Establishment as furnished to Mr. Ricketts.

Existing Scale.†	Per annum.	Total.
Commissioner ..... at,	35,000	35,000
Civil and Session's Judge, ... .. "	30,000	30,000
1 Superintendent, ..... "	18,000	18,000
2 Deputy, ditto, ..... "	12,000	24,000
1 Ditto, ditto, ..... "	7,200	7,200
4 Deputy Commissioners, ..... "	12,000	48,000
4 Ditto ditto, ..... "	7,200	28,800
4 Covenanted Assistants, ..... "	6,000	24,000
1 Uncovenanted, ditto, ..... "	7,200	7,200
3 Ditto, ..... "	6,000	18,000
8 Ditto, ..... "	4,800	38,400
5 Ditto, ..... "	3,000	15,000
4 Ditto, ..... "	2,400	9,600
8 Ditto, ..... "	1,800	14,400
4 Assistants employed on settle- ment duty, ..... "	6,000	24,000

This return was furnished before, Major Pinkeney was appointed to Jhansi; and does not shew the strength of the civil establishment or the Tahsildars.

† See Mr. Ricketts' report.

committed this crime, or where he has not at the time been employed as a watchman, guard, or police officer, or where the value of the goods does not exceed 100 Rs; theft unaccompanied by these aggravating circumstances, or where the property does not exceed 300 hundred Rupees, receiving stolen property, affrays and assaults.\* His assistants and deputies exercise criminal jurisdiction in all cases that may be referred to them for trial. They exercise the judicial powers of a Magistrate, or the special or ordinary powers of an assistant. In these Territories a preliminary examination in Law and procedure is necessary to the attainment of more enlarged powers. The furor manifested for examinations is indicative of good. When in 1858 Lord Stanley in the House of Commons said 'that competitive examination will prove itself 'stronger than all parliaments, and all Governments, and superior 'to all influences brought to bear against it,' he expressed an idea which was to become a fact long before 1861. In England the middle class examinations and the examinations held by the Society of Arts were opposed much in the same manner as the old Indian Bureau opposed examinations in India. In the Saugor and Nerbudda territories the examinations have resulted in making every officer more conversant with the nature of the duties he has to perform.

While much praise has been due to the zeal, energy, and ability of the European officers of these territories, those who have read Mr. Caldecott's report will perhaps find something to regret in the too extensive native agency employed in the administration: Mr. Caldecott called attention to the necessity of a strict surveillance on the conduct of the native officials employed. He did not think much either of their intelligence, or of the purity of their morals. And Mr. Caldecott was right. To the extortion, bribery, and corruption that was subsequently found to prevail among the native Sudder Ameen and native assistants, was owing Lord Ellenborough's first change in the administration of these provinces. With no ideas of moral right and wrong, with no recognition of the restraints of conscience, with scarcely any education, the native of India is generally entrusted with far larger powers than can judiciously be given him. Writing as we do, we are only echoing the opinions of some of the best judges of native character. -Sir Barnes Peacock has said.

'His laborious duties, and the limited period of his holding 'office, did not allow of his visiting various parts of India, in

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\* For the other cognizable misdemeanours, let the Reader refer to the Schedule of April 11, 1850.

‘order to collect local information, or to ascertain, by personal experience how the laws worked and were administered. He had heard much of the corruption of the native police, and of the inefficiency, to say the least of it, of the native judges, and often when a law was proposed by one person he was told by another that the police would convert it into means of extortion or that the native judges could not safely be trusted with its administration. The nature of these difficulties were such as almost to have appalled and overwhelmed him.’ Nor is Sir Barnes Peacock the only English Gentleman who has held this opinion, Sir Henry Miers Elliott, and Sir Henry Lawrence used to express their unwillingness to give natives extensive powers. Another officer whose insight into character and whose experience through a long Indian career should lend weight to his assertions thus writes. ‘Profligacy, fraud and peculation among the native servants of the state are inseparable from the education, or rather the want of education which has been theirs. It is only the explosion of some gigantic fraud that creates a ripple on the smooth current of official business. By Anglo Indian officials such disclosures are accepted with stoical indifference as part of an unalterable system; while among the natives it creates only an irritation at the stupidity of one of their kindred in having betrayed a want of that low cunning considered by many as indispensable to the education of a man of business. The culprit is looked upon as having brought disgrace on the community from his want of tact. The moral guilt is of no consequence; success alone makes the hero.’

It is to be regretted that native agency should be so largely employed in these territories. It is only by the more extensive introduction of European agency into the administrative machinery, that our great expectations of Indian progress can be realized. If one truth more than any other is rapidly gaining ground, it is this, that the oriental form of Government must give place to one based on constitutional ideas; the triumphs of the Indian Government ought to be like the triumphs of the United Kingdom in the nineteenth century; triumphs as well over social errors, as over the material universe. It is only by the introduction of European capital and by the employment of European energy, that we are to expect those splendid results which the great and undeveloped physical resources at our command promise. As we write we can picture to ourselves what in a single decade of good Government might be effected. Territories like these afford the best illustration of the valuable nature of our acquisitions in the East; they shew how the

energy and ability of a few European officers, in a space of time scarcely stretching over forty years, have restored much of their original prosperity to vast tracts ravaged by war ; how agriculture has been fostered, and how just laws and wholesome discipline have tended to the maintenance of internal peace.

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ART. VII.—*Friend of India*, August 1st and August 29th, 1861.

THE relations between work and wages form one of the most perplexing problems of Eastern life, and tend more than anything else to mislead European capitalists when they sit down to estimate the gains of industrial enterprise. The knowledge that a weaver is satisfied with three pence a day, that the goldsmith is content if he can earn sixpence, though the one can make the Muslins of Dacca, and the other spin the fairy webs of gold and silver which we buy at Delhi and Cuttack, has in many instances furnished the incentive to disastrous undertakings. It is natural to suppose that where nature has done so much and art so little; where life is sustained so cheaply; where patience sits in lieu of energy; and intellect abounds, whilst will is thoroughly enchained, that the wisdom, the wealth and the force of the European must always succeed as well as dominate. In countries where the richest products of vegetation grow almost spontaneously, where the most valuable minerals abound, where order is assured, labor plentiful, and cheap beyond comparison, capital very scarce, and machinery almost unknown, it seems impossible that schemes for cultivating and manufacturing with the aid of European modes and means should fail. Yet they *do* fail, and that so frequently and so thoroughly, that if a balance were struck between the fortunes lost and the fortunes made by such profits, it is hard to say which total would be the largest. When undertakings of this kind are set on foot, it is not sanguine men who are needed to support them. Persons who are timid from experience or habitually distrustful, enter eagerly into them, and never allow a thought of probable miscarriage to enter their minds. The calculations appear to be so sound, the expectations so reasonable, the margin of profit so wide, that success is looked upon as an absolute certainty, and the chances are, that when ruin ensues, it is set down as the effect of fraud or bad management. The existence of the

‘Little rift within the lute  
That bye and bye will make the music mute’

is never at any time suspected though it was there from the beginning. The plan that looked so feasible required one small element that wit could not foresee and money could not buy, and wanting which, all other probabilities in its favor went for nothing.

If one were content with educing from the records of these melancholy shipwrecks of earnest effort, a maxim of wide application, it would be sufficient to prove that the triumphs of industry like those of the intellect and the conscience, can only be achieved by slow steps, and that many props are needed to sustain one giant growth. A great manufacture like a great idea may be suddenly created, but to grow and be propagated it must have the co-operation of the people at large. Before it can be incorporated with the machinery of natural life and be allowed to influence its pulses, every part of the existing organization must suffer a change.

The steam boat and the Railway are exceptions to an otherwise universal rule, and for the reason that they are self-contained and do their work without requiring extraneous aid. The engine travels on its own pathway, which lies perhaps across swamps where the soil will not bear a man's footstep; over rivers which ordinary commerce would scarce bridge for centuries to come; through narrow tracts where the travelling merchant would never care to find his way. In new countries it begins and finishes at the same time the work of civilization so far as the means of locomotion are concerned. In the organization of an express train, invention seems to have reached the limits of natural possibility. We can travel if we like as fast in India as in England, asking no favour at the hands of Asiatic skill, no help from Asiatic resources.

It is wholly different when we come to apply the refined processes of European skill to manufactures in the East. The very perfection of our method is the cause of failure. The animate and the lifeless machine partake in this respect of the same disadvantages. If a man attains great proficiency in pointing pins he must always have pins to point or starvation meets him in the face, and the machine in like manner must always have work to do, or it will not pay. It can probably get through its tasks in a style that defies competition, but if it has cost too much to make or is left idle now and again it fails as a source of profit. Let it be ever so exquisite a specimen of ingenuity it is only part of the larger machinery of human effort that never intermits its tasks in any part of the world, and must always be in gear with it. Let us take our first illustrations in point from Cocoanut planting and Oil making in Ceylon.

A native plantation of Cocoanuts has the air of a natural jungle. There are no traces anywhere of culture. Decayed fruits and branches strew the ground from one end to the other lying where they fall till they rot. A bullock cart trying to thread its

way through the place has to wind amongst a labyrinth of trees planted usually without order or regard to ventilation. You see at a glance that vegetation is left to take care of itself, and certainly there is no part of the world where a valuable and never failing product obtains such little care from the owners.

Under these circumstances, it was quite natural to suppose that if Cingalese proprietors of cocoa-nut estates did well, Europeans would do better. It had been proved by all native experience that the tree would spring up and bear fruit without receiving proper care, and if that were bestowed, there was no saying to what extent the yield might not be increased. So an idea got abroad amongst resident merchants, Indian civilians and soldiers, and capitalists at home, that one of the best investments for money was a cocoanut estate in Ceylon, and about fifteen years ago it began to be realised. Since that period about five thousand acres of land have been planted in the peninsula of Jaffna, and maintained up to this hour at a cost of about a quarter of a million sterling with the unhappy result of total failure in every instance. Many estates have never paid their expenses, and in June of the past year a property consisting of a thousand acres, upon which more than £25,000 had been spent, was sold to the great joy of the owner for something considerably less than a sixth part of the cost. And over the same period of time it would not be possible to point out a single example where a native plantation has failed to be a source of great profit. At an average growth of eight years an acre of cocoanuts is worth £4 a year over the whole island.

In all the cases we have mentioned, European superintendence was carefully maintained. The plantations were laid out regularly with ample room between each row of trees. The best nuts were selected for planting, and as they grew up, they were watered and watched with untiring care. As vegetation sprang up, it was scrupulously cleared away. The ground was often ploughed and weeded, and experiments in manuring and general treatment were frequently set on foot. But cleanliness costs money and our countrymen were out of gear with the work going on around them. To make the European device of large estates successful they required a large amount of resident labor, and that was frequently not forthcoming, or found to be so expensive that it was dispensed with when most wanted. They ought to have had machinery for watering the trees and manure for supplying the place of the decaying material, which was made such a point to be rid of. To the Anglo-Saxon confident in the strength of his will, the lasting quality of his energy, the

wisdom of his civilization, and the power of his money it is doubtless a source of mortification to be obliged to confess, that the Native's method of going to work on such an occasion, is worth them all and much more. But the fact is not to be gainsaid, and future efforts in the same direction are sure to be followed by like consequences.

The Cingalese have a proverb that the Cocoanut will not grow out of sound of the human voice. The conceit no doubt had its origin in the universal experience of the superior advantage of home cultivation to persons so placed. Their plantations average perhaps half an acre, containing usually some fifty trees which the family can look after when the owner is absent. It is no trouble to be thought of or paid for, to water the young plants so long as they need it. The cattle who are always on board wages roam in and out at pleasure being merely fenced off from the shoots till the latter are too tough for eating. The place is filthy and very hot, but the Cocoanuts evidently like dirt and thrive accordingly. Whether they would prefer being dieted on patent manures, drinking from scientific watering pots, and receiving daily visits from Europeans on horseback, is a problem, the second half of which is not likely to be solved in this generation.

If the growth of the Cocoanut disturbs our notions of the superiority in all instances of European processes in agriculture, the details of its conversion into oil are no less suggestive of doubts on the side of manufactures. The native oil mill is one of the oldest machines in the world, exactly similar in shape to the mortar and pestle of the druggist, the former being worked by a shaft, to the end of which a pair of bullocks are attached. The cattle travel in a circle of about 18 feet diameter, and make three complete revolutions in a minute. Half a hundred weight of Copperah, as the dried kernel is called, is a charge for a full sized checkoe and a pair of stout well fed bullocks will get through four such charges in a day. The man who drives has usually a boy to assist him in taking the oil which is got out of the mortar by dipping a piece of rag into the fluid and squeezing it into an earthen vessel. It is not the purest and brightest of liquids as may well be imagined.

Of late years large sums of money have been sunk in the purchase of European machinery for oil making between which and the native mills there can be no comparison for power, quantity of work done, or the quality of the product. The copperah is first crushed to a pulp between edge rollers, and then placed in bags upon the table of an hydraulic press. The pressure

exerted is immense, and in the case of the most powerful of these machines the oil is so thoroughly extracted that the residuum of the nut feels like dry flour and falls into fine powder.

Now looking at the two modes of accomplishing a given end, the primitive and the highly refined, are we not bound to conclude that the latter must in every way bear the palm? surely so, but then on the other hand it is admitted that

‘The value of a thing  
Is just as much as it will bring,’

and tried by this supreme test of worth we must fain adopt a different conclusion. Here are the opposite data from which it is impossible to deduce results of a pleasant complexion.

A mill of ordinary size can work off say two tons of copperah daily, and it is putting the cost of machinery, buildings, and all requisite appliances, at a sum far below actual outlay when we set it down at £2000, and at least £500 must be employed as floating capital. An Engineer would be very badly paid at £150 a year, and if he were manager of the concern as well, £300 would barely ensure the continuance of his services. All other expenses, labor and contingencies are very cheaply estimated at £25 monthly, or £300 per annum.

The depreciation of machinery is set down always at 10 per cent annually, which is a charge of £200 in the present case. We must allow the owner a like percentage on his capital or £250, and if to these are added the charges of management, labour and all other needful payments, we have an annual cost of £1050 and a production of oil from the working of two tons of copperah daily.

As before stated, the daily duty of a checkoe is 2 cwt. of copperah, so that twenty mills are required to get through two tons in the twenty four hours. The cost of the native oil mill with serviceable bullocks is rather under than over £20, but we will take it at that figure which brings the outlay requisite to compete with the European establishment in the point of outturn to £400. Here is a gain in favour of native industry at the outset of 80 per cent in the amount of capital sunk in machinery. Let us now examine the working expenses incurred by the latter.

Neither bullocks nor checkoe will last, it may be presumed, beyond five years, so that on the capital of £400, there is a yearly charge of £80, or 20 per cent. The wages of a man and boy to each mill are fifteen pence, and a pair of bullocks fed luxuriously, entail a daily cost of one shilling more. There are no other expenses and the total amounts to £755. It is

absolutely beyond question that to perform equal quantities of work the native manufacturer has to employ but one fifth of the capital required by the European and saves in the doing of it five shillings in the pound.

It might occur that weight being equal as to out-turn, the engineer produced more oil from the same quantity of kernels or made an article which realised higher prices, but neither unluckily is the case. The ordinary Hydraulic press extracts no greater percentage of oil than a well managed checkoe, and as to quality the buyer at home is understood to have a preference for that which is not over purified. The process needful to improve the color is said to render the material of less value for certain uses, and whereas in the case of the Hultsdorp mills at Colombo no less than 7 per cent. is added to the weight of oil produced, the addition is far from being clear gain. The cake after it is pressed is worth a seventh part of the value of oil, and when so much as seven parts in the hundred more of oil is taken out of it as compared with ordinary Poonac its value as food for cattle is proportionably diminished. Five per cent additional is the very utmost that can be credited to the establishment in this respect as compared with the out-turn of other mills worked by steam and bullocks, and it utterly fails to meet the enhanced expense of working consequent upon the costly character of the machinery employed; that excellence in machinery like all other good things may be bought at too high a price, is a matter not to be gain said.

If ever there existed a justification for sanguine hope and wasted treasure, it will be found in the case of the experiments made with regard to those fibrous substances which grow wild and so abundantly in the tropics. The most exquisite fabrics woven in Indian looms from the gossamer threads of the Cotton plant fail to rival in beauty the products of the Pine apple, the *Sansevieria Zeylanica*, the *Calotropis Gigantea*, the Aloe, and many varieties of the nettle tribe. Some are bright and almost as soft as silk, to which they might perhaps be made fully equal by the application of chemical skill. Many are stronger than the best hemp, others are all but indestructible in water. They ask no trouble at the hand of man to facilitate their growth, the barren soil serves for their habitation, they are self planted and self supported, they spring up, no one knows how, where cultivation has been abandoned, or where it has never been known. The native uses them for his fishing lines or nets and for ropes of all sizes and strengths, but except in the Phillippine Islands and China no attempt is made to convert wild fibres into clothing. The demand for them in the

shape of textile material in the European markets would be illimitable, and relieve the strain on cotton so as to enable our manufacturers to breathe easily; but we have not as yet mastered the secret of profitable conversion. Our efforts to that end have always taken the shape of experiments in machinery, whereas we should look to chemistry instead. There is surely a solvent to be found which would destroy vegetable pulp, whilst it left the fibre untouched, or if such an agent would be too expensive, it might be found possible to restore the natural color and pliability of fibres prepared by the native methods of steeping the plant till decomposition enables them easily to draw out the thread. The worth of an invention which should utilise all fibrous substances would be so great, that one only regrets the perpetual failures, and dare not condemn the perpetuity of effort to retrieve them.

The Asiatic sits on the ground with a board on his knees, a wooden knife in his right hand, and a strip say of plantain leaf in his left; the other end of which is securely held by his toes. He lays the strip of leaf on the board and scrapes away carefully, until the whole of the fleshy matter is removed, and the beautiful fibres disclosed. You see at a glance the many uses to which they might be turned. Mixed with silk they would make damask, or they might be employed as substitutes for the materials now used to make gimp or moreen, or they might add another to the numerous imitations of alpaca. All that is requisite to make the thing 'pay' is that the fibre should not be too dear, and that it should be sent forward in quantity. The latter necessity was ignored by the late East India Company, who for several years took infinite pains in having all sorts of fibres prepared under scientific superintendence; the products being sent forward to the India House in bales. When samples were sent to the manufacturers for valuation, the latter named prices based on the softness, the color, or the strength of the fibre, as compared with textile materials in actual use; but when the usual clearance sales took place, the authorities were surprised and disgusted to find that the amounts realised were only perhaps a fourth of the valuations. It never occurred to them that the estimates of worth were calculated upon working data, and that purchases were only made from motives of curiosity. A fibre which cannot be produced by thousands of bales is literally worthless to the weaver. He cannot afford to alter his machinery merely to work up penny-worths of a new material, however valuable in the abstract. The inventor then of a mode of preparing fibres must always have it in mind, that *quantity* is even of more consequence than quality, something can always be made of an article which is to

be had in abundance. To the manufacturer 'a thing of beauty' so far from being 'a joy for ever,' may scarcely be an object of momentary interest.

About eight ounces of fibre can be produced in a day by the scraping process, and allowing only two pence for the laborers wages, the fixed cost per cwt, is £1-17-4, a rate which is fatal to the hopes of commerce. No fibres made by hand labour can possibly yield a profit, except where the steeping and rotting process is brought into play. The Manilla hemp made from the wild plantain, *Musa textilis* and Jute, and Sunn are well known to commence. The two latter products of Bengal, pay tolerably well, owing to the facility with which the fibres can be stripped off after soaking in water, but all the finer material is left untouched, and this discouraging result has followed on the heels of incessant labor and invention for the last thirty years.

The most promising of all the fibre machines is the invention patented by Mr. Burke, which with some alterations would effectually clean the plant at a single operation. But in the first place, it is unsuited to the wants of the manufacture, as it cannot be worked by hand; and secondly, it fails from causes beyond the inventor's control. The average yield of fibre from the plants that grow most abundantly is not more than four per cent, so that twenty five tons of material covering on the average a couple of acres have to be cut, carted and passed through the machines in order to the production of a single ton of fibre. Only a large amount of invested capital and the formation of establishments for growing and manufacturing on the largest scale could make the invention profitable. If the factory were raised in the midst, say of a thousand acres of plantation, and supplied with engines and machinery at a cost of £ 5000, it would no doubt yield a handsome profit, for the crops of Plantain, and Sansevieria, never fail, and the plants reproduce themselves, so that labor in reference to their growth and preservation is a very small item of cost. But we want a machine which shall do for fibrous plants in general what the village churka does for cotton, a machine which the village carpenter and blacksmith can make and keep in repair, portable, cheap, and efficacious. Even if chemists discover an effectual mode of getting rid of the pulp, it would not be put in practice by Indian ryots, who are utterly unapproachable in the matter of new devices of that sort. It would be for Europeans only to deal with scientific methods, but their utmost efforts however successful, would be the merest trifle when compared with the vast production of fibres by natives, if a simple machine were put

into their hands. There is scarcely a hut that is not partially shaded by the plantain tree, and hardly anywhere is the fibre put to local use. The supply of cotton would in that case fall far short of the production of other fibrous substances fit for the loom, to the great benefit both of ryots and weavers.

Cocoanut fibre, which is used so largely both at home and abroad has been as a matter of course the subject of numerous scientific processes, leading to the ordinary results, great improvement in the manufacture of the article, and much disappointment to the inventors. As practised in the East the manufacture is, perhaps, the simplest in the world. The husk is steeped in water and mud for several months, and when taken out, a few blows with a piece of wood get rid of the decomposed pulp, and the fibre after a slight washing is ready for the market. The color is frequently dingy and the natural strength is somewhat impaired, but such as it is, made by women and children, it yields a handsome profit, whereas the beautiful specimens of coir fibre and coir yarn made by machinery entail a loss. The power required to separate the fibres from the husk when but slightly softened by a few hours steeping is very great, a ten horse power engine working ten machines will hardly get through five cwt daily, and though the fibre is vastly superior to the native article, the market value is so little in advance of the prices given for the latter, that the business is found not to pay. Just so with the yarn, for which patent machinery was set up in Ceylon last year. It was spun very regular and of a degree of fineness not to be found in native specimens, but the inventors and patentee have discovered that the public do not care to pay for better yarn than the women and children can furnish with the sole aid of their fingers. The ingenious and hopeful persons engaged in what has turned out so unfortunately, overlooked the fact, that there are very narrow limits to the use of coir owing to the imperfections of the staple. It is harsh and brittle and cannot be made to take the place of twine, or whipecord. And so another promising scheme drops into the limbo of unusable inventions.

If Cotton can be grown in America where slave labor costs fully two shillings a day, and still give large profits to the grower, why can it not be far more advantageously cultivated in the East, where the cultivator is well paid at the rate of three pence a day? Such is the question which many an enterprising Englishman has asked himself, solving it in the way which entails certain ruin. It is quite true that the soil of India is over vast tracts, eminently fitted for the production of cotton, that

American sorts thrive in many districts, and that the difference in value between the best samples of the one, and the worst of the other is not equal to the difference in the cost of labour. But it is also true that no European can grow cheap crops except at a loss. To afford himself even a chance of success he must take up land to a great extent, and the difficulty of superintending it, is sure to beat him. His average production per acre even if he were reasonably dealt with, would not be above 1 cwt, the average of the Madras presidency is but 50lbs of clean Cotton. Say that it is worth 4d per lb on the spot, the gross value of the cultivation is but £1 17s 4d per acre, so that some thousands of acres must be bought or rented if he would expect even in theory to make a good thing of it. Now a farm so extensive is not to be had in one block except where there is little or no population, and if labor is scarce, how is the cotton to be picked? He must either be content to get hold of a patch of suitable ground here and there, as occasion serves, and so put himself in the hands of native overseers entirely or abandon the scheme. Indigo which is worth five shillings a pound can be grown with enough however of trouble and disappointment, and coffee which is worth £30 an acre, and is grown on compact estates, in an almost temperate climate, can be raised with success, but the cultivation of cotton by Europeans is utterly out of the question in any part of the tropics.

Perhaps there is not much more morality amongst English workers than amongst Asiatics, so far as the desire to do a fair day's work for a fair day's wages is in question. Any one who has been amongst shipwrights, knows what significance they attach to the phrase "a dock yard stroke" when alluding to the infrequent and lazy blows of one who has been in Government employment and amongst other classes of mechanics, strict superintendence and careful measurement of work are not to be dispensed with. But there is a peculiarity in the native mode of estimating the value of labor which has a very misleading effect upon the minds of Europeans seeking to push trade into new channels. A carpenter in England if he makes a box at home after working hours, expects to receive as much for it as a buyer would have to pay if he purchased it from his master; and though he may be content to halve the master's profit, still in estimating the value of his labor, he makes no abatement on the score that it was performed on his own account in his own bedroom, instead of in the workshop in the regular hours. The Asiatic proceeds upon the opposite system. Buy the work of his hands and you may do well, but hire him to do the like for day wages, and the

results are widely different. Labouring on his own account he takes no note of the hours. Himself, his wife, and children all take spells at the task in turn. The ultimate pay-master has nothing to do with sickness, short crops, or idleness, the bargain is governed wholly by the market rate. Perhaps after all he deals fairly after his fashion. Time is nothing to him, and he expects that it is nothing to you, but woe betide you if you reason upon the data furnished by his course of independent action, you can buy a ton of plumbago at the pit's mouth in Ceylon for fifty shillings, dig it yourself, and it will cost you at least on the average five pounds.

Upon sugar growing and refining, cotton growing and various chemical processes, we shall have something to say on a future occasion.

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